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## EXTRACTS

FROM

# REPORTS ON TOWNSHIPS 33 TO 88, WEST OF THE PRINCIPAL MERIDIAN

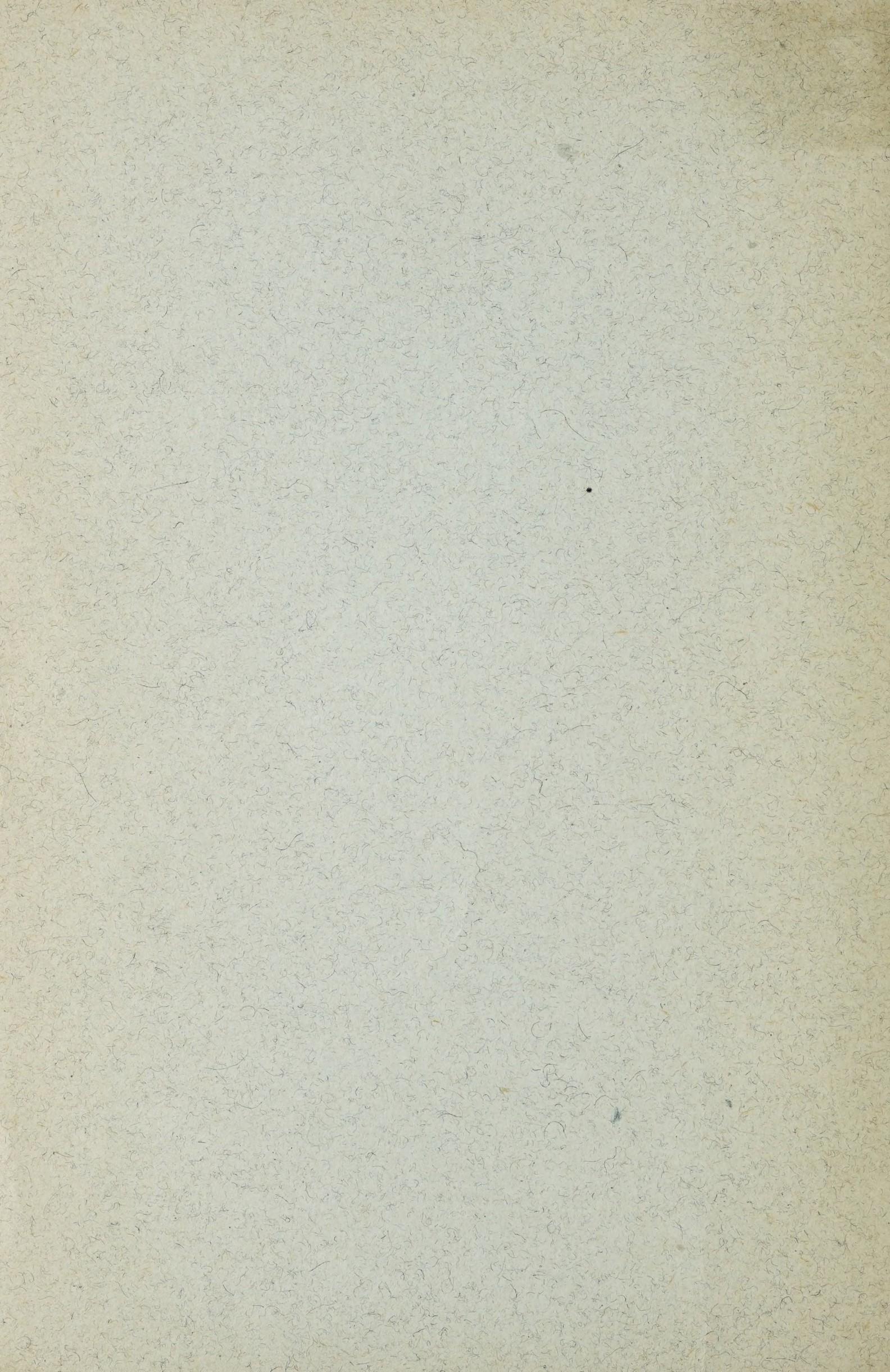
RECEIVED FROM SURVEYORS

TO MARCH 31, 1915.



COMPILED IN THE OFFICE OF THE SURVEYOR GENERAL.

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## **NOTICE.**

The descriptions of townships and township outlines contained in this pamphlet have been taken from surveyors' reports on file in this office. All reports received to March 31, 1915, are included.

The townships are placed in ranges, the number of the range being at the top of the page and the number of the township in heavy figures on the left side.

E. DEVILLE,  
*Surveyor General.*

TOPOGRAPHICAL SURVEYS BRANCH,

DEPARTMENT OF THE INTERIOR,

OTTAWA, Aug. 12, 1915.



**LIST OF TOWNSHIPS, REPORTS ON WHICH ARE CONTAINED IN  
THIS PAMPHLET.**

WEST OF THE PRINCIPAL MERIDIAN.

<i>Township.</i>	<i>Range.</i>
48 to 88 . . . . .	1
'68, 72, 76 . . . . .	2
68, 72, 76 . . . . .	3
68, 72 . . . . .	4
68, 70, 71, 72 . . . . .	5
36, 68, 70, 72 . . . . .	6
68, 69, 70, 72 . . . . .	7
33, 34, 35, 36, 68, 69 . . . . .	8
33, 34, 35, 36, 64, 67, 68 . . . . .	9
33, 36, 65, 66, 67, 68 . . . . .	10
33, 34, 64, 65, 66, 68 . . . . .	11
33, 34, 65 . . . . .	12
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33, 34, 60, 64, 68 . . . . .	14
33 to 36, 63, 64 . . . . .	15
40, 44, 63, 64 . . . . .	16
33 to 36 . . . . .	17
32 to 35, 40, 41, 42, 61, 62 . . . . .	18
33, 34, 35, 38, 39, 40, 41, 61, 62, 64 . . . . .	19
34 to 40, 61 . . . . .	20
33 to 37, 60, 61 . . . . .	21
33 to 37, 56, 59, 60 . . . . .	22
33, 35, 36, 37, 58, 59 . . . . .	23
35 to 41, 56, 57, 58, 60, 61 . . . . .	24
35 to 41, 43, 44, 56, 57, 58 . . . . .	25
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34 to 38, 44, 53, 54, 56 . . . . .	27
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33 to 36, 44, 49, 50, 51, 52, 56 . . . . .	31
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33, 34 . . . . .	33



# TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

## RANGE 1.

The country traversed between townships 48 and 60 was found to be **48 to 60.** all of the same general nature, low, wet swamps and muskegs alternating with outcrops of rock of the Laurentian formation which invariably run in a northeasterly and southwesterly direction. Patches of dry ground covered with spruce from two to eight inches in diameter were occasionally met with, but in no case were they observed to cover any large area. The soil in such cases was sand or frozen clay. The soil throughout is generally black vegetable muck, which, even in event of draining, cannot be regarded as suitable for agriculture. Along the banks of the Belanger, Gunisao and McLaughlin rivers occasional patches of sandy loam occurred, where farming could be followed on a small scale. The country is timbered with spruce, jackpine, tamarack, poplar and birch, but in no instance was it found of sufficient size for milling purposes. Evidences of recent fires were observed, but on the whole they had not spread far, owing to large areas of open muskeg. Timber cannot reach a greater growth than six to eight inches, where the roots rest on perpetual ice; the scarcity of timber which is now rapidly approaching, may make the drainage of this country a profitable investment at no distant date. Jackpine is confined to the rock areas, but none of sufficient size for railroad ties was observed. Hay is present as muskeg grass, but beaver meadows appear to be entirely absent. Water is generally very clear and good, and this applies even to the muskegs. A few small creeks were crossed. Belanger, Gunisao and McLaughlin rivers are fine streams, averaging 100 feet in width. These streams are of varying depths and have no perceptible current, except near small falls which occur at intervals. Falls of from two to ten feet occur on these streams, with apparently a permanent supply of water. The climate cannot be judged by the weather conditions of 1911, as they were unusual throughout Manitoba, Saskatchewan and Alberta, a late spring being followed by poor ripening weather. Potatoes of excellent quality are grown at Norway House. This district lies within the Laurentian formation, and the rock, being massive and without cleavage, is not generally suitable for building purposes. No minerals of economic value were observed, and the Laurentian rocks seem unpromising in that respect. Feathered game is plentiful, and although armed only with sticks we obtained many partridges and prairie-chickens. Ducks abound along the rivers. Several cow moose were seen and I understand that both moose and caribou are plentiful. Fish is the staple food of the natives and they always seem to have a plentiful supply.

—A. W. Ponton, D.L.S., 1911.

(*North outline, ranges 1 to 4.*)—The country from the Principal meridian to

**56.** Playgreen lake is a series of spruce and tamarack swamps with a granite outcrop about once or twice in each mile of line. There is a small amount of spruce along the banks of the McLaughlin river. The soil in most places is a black muck unsuitable for farming. There are occasional clay ridges of poplar and birch, but these are too scattered and small to be of great value. For information as to climate and game, see the report on tp. 60-14-Pr.—O. Rolfson, D.L.S., 1913.

(*North outline, ranges 1 to 13.*)—The country throughout these ranges is

**60.** very swampy and covered with inferior spruce and tamarack. Near the Nelson river the land is drier and covered with spruce, jackpine, birch and poplar. Along the west side of this river the line runs for about two miles through a brûlé ridge. From range 2 to Playgreen lake, near the east outline of range 4, the country is swampy, covered with spruce and tamarack. Between Playgreen lake and Kiskittogisu lake (ranges 5 and 6) the line runs through a small belt of spruce from six to twelve inches in diameter. Between the latter lake and Kiskitto lake the country is swampy and covered with small spruce and tamarack. For five miles to the west of Kiskitto lake the country consists of tamarack swamps with spruce ridges; west of this the swamps are more extensive and the spruce occurs as knolls in the swamp. For a short distance on each side of the Minago river, which is crossed in range 11, the country is burned and covered with deep windfall. For information as to climate and game, see the report on tp. 60-14-Pr.—O. Rolfson, D.L.S., 1913.

## TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

(*East outline.*)—The northeast corner of township 60, range 1, is situated on the north slope of one of the largest jackpine ridges encountered in this country. The soil is a light gravelly sand, supporting nothing but a growth of jackpine, averaging from three to seven inches in diameter. North of this a large tamarack swamp is met. The trees here are very much stunted and of no practical use. To the east of the line the generally level surface of the country is broken by many ridges of outcropping rock which in some cases rise twenty to fifty feet above the surrounding level. To the west the swamp stretches away off towards the river. As one nears the northeast corner of this township the land becomes more undulating, falling gently towards Nelson river. It is broken by frequent outcrops of rock. On these rocky outcrops small jackpine grow wherever any soil is found; this soil is generally moss-covered, black muck. Near the northern boundary the first crossing of the east channel of the Nelson river is made. For information as to game see the report on township 72, range 1.—*G. H. Herriot, D.L.S., 1912.*

(*East outline.*)—This township is much broken by channels of the Nelson river. 62. The river has many small islands, most of which are covered with dense wood. Poplar and spruce form a fringe about the edge of the islands, while the interior is not so heavily timbered. Frequently muskeg is found on these islands. The soil is suitable for agriculture being in many places covered with a vegetable mould. In section 36 the Nelson river is crossed. For information as to game see the report on township 72, range 1.—*G. H. Herriot, D.L.S., 1912.*

(*East outline.*)—In this township the swamps seem to become narrower and 63. the recurrence of swamps and jackpine ridges becomes more frequent than in the township to the south. The rocky outcrops almost entirely disappear, although the rock comes to within a few inches of the surface on the summit of each jackpine ridge. The surface soil varies from a deep black muck in the swamps, to a yellow clay on the ridges. This clay area would seem to indicate that this belt is really an extension of the great clay belt of northern Ontario. Near the north boundary the line crosses a shallow irregular lake about three miles long and two miles wide. Its waters overflow through a shallow creek, about a chain and a half wide, which, after a meandering course of about two miles, finds its way into a branch of the Nelson river not far from where the river expands into Pipestone lake. The latter is a rock-bordered lake, about five or six miles long and nearly the same in width. For information as to game see the report on township 72, range 1.—*G. H. Herriot, D.L.S., 1912.*

(*North outline, ranges 1 to 8.*)—East of Cross lake the country is spruce 64. swamp. The timber is of little value, being the ordinary stunted growth generally found in wet country. Near Cross lake, on both sides, and on the island crossed by the line, the soil is clay loam, underlain by granite, and is covered with spruce, birch and poplar from six to fourteen inches in diameter. West of this the country becomes softer and much wetter, and the timber changes to the small spruce and tamarack of the swamps. For information as to climate and game, see the report on tp. 60-14-Pr.—*O. Rolfsen, D.L.S., 1913.*

(*East outline.*)—The surface of this township is very irregular, the southern 64. portion being broken by high, rocky ridges and intervening valleys, while the northern portion, although less rolling, is broken by the recurrence of rocky outcroppings and swamps. The soil is clay on the slopes of the ridges, and black muck covered with moss in the swamps. Two small lakes occur close to the line, and a third, named Target lake, is crossed in section 36. For information as to game see report on tp. 72-1-Pr.—*G. H. Herriot, D.L.S., 1912.*

(*East outline.*)—In this township the land is more undulating and the swamps 65. do not seem to be of such great extent as in the townships to the south. Their character changes and the tamarack swamps with much standing water give place to the drier moss swamps covered with spruce, and broken more frequently by jackpine ridges. The soil, too, is of a better quality, clay loam being found in many parts. In section 36 Cross lake is reached. The lake is a long irregular body of fresh water surrounded by a rocky shore-line. It is six miles wide, probably fifty miles long, and is dotted with innumerable islands, many of which are very large. The islands are usually rock-bordered and covered with a dense growth of jackpine and spruce, some of the trees reaching a diameter of sixteen inches.—*G. H. Herriot, D.L.S., 1912.*

## TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

(*East outline.*)—The whole of township 66 lies in Cross lake and what land area exists is in the form of islands covered with an abundant growth of spruce and jackpine. For game, see report on tp. 72-1-Pr.—G. H. Herriot, D.L.S., 1912.

(*East outline.*)—The meridian strikes the north shore of Cross lake in section 67. 1 of this township. The surface is mostly low-lying and very wet. The soil is largely black muck. Across the northern part of the township the land is higher and drier, and has been swept by bush fires, so that the area is covered with standing, fire-killed trees. For game, see report on tp. 72-1-Pr.—G. H. Herriot, D.L.S., 1912.

(*North outline.*)—The surface of this range is more or less rolling, and is broken in section 1, township 68, by a shallow lake and again in sections 32 and 33 by an irregular lake. In the low parts, moss swamp with small patches of muskeg occurs. The higher lands are of clay loam and fairly suitable for agriculture. The timber is mostly small spruce, tamarack, jackpine and some poplar. Most of this country has been fire swept within recent years, and these fires have so destroyed the soil that it looks as if its fertility had been impaired. Scarcely any grass grows on the clay owing to its impoverished condition. Land where vegetation had formerly been luxuriant, can now hardly support such trees as the hardy jackpine. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

(*East outline.*)—As we worked northward into this township, the burned area gave place here and there to tamarack swamps where it was too wet for the fire to run. The soil, too, seems to improve and more clay is found. For game, see report on township 72, range 1.—G. H. Herriot, D.L.S., 1912.

(*East outline.*)—This township is more broken by small lakes than the township to the south. The country is covered largely with fire-killed trees, except where tamarack swamps intervene. The soil varies from a deep black muck to a heavy clay. In the northern part of the township Sipiweesk lake is encountered. This lake is broken by innumerable little islands, channels and bays. It is about twelve and a half miles from shore to shore along the meridian and roughly thirty miles long. Many of its islands are covered with dense spruce, some trees reaching from sixteen to eighteen inches in diameter. In some of the narrower channels of the lake the current is quite perceptible. Along a few of the islands large hay marshes occur. For game, see report on township 72, range 1.—G. H. Herriot, D.L.S., 1912.

(*East outlines.*)—These townships are broken by the many channels of Sipiweesk lake. The islands are largely covered with dense spruce. The soil is deep clay except in the swamps where black muck appears. In section 36, township 71, the north shore of Sipiweesk lake is reached. For game, see report on township 72, range 1.—G. H. Herriot, D.L.S., 1912.

(*North outline, ranges 1 and 2.*)—The surface throughout these ranges is generally rolling and mostly dry, except along the shore of Landing lake, where it is more broken. The soil is clay loam, suitable for agriculture. The greater part of this area has been burnt over recently, and the surface soil was badly burnt. To the north of the base line the country is broken by Landing lake, a beautiful rock-bordered lake probably thirty miles long and from one-half to one and a half miles wide, with a few deep bays breaking its otherwise regular contour. This lake is reached from the Nelson river by way of Cross portage, which is one and a half miles long, and from Wintering lake on the west by way of Thicket portage, which is one and a quarter miles long. The surplus waters of the lake find their way into Nelson river to the east down the Landing river. In section 32 of range 2, the west shore of Landing lake is reached, and from this point westward the timber is dense, consisting of spruce, jackpine, poplar, willow and birch, with tamarack in the low places. For information as to game, climate, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

## TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

(*East outline.*)—The surface of this township is generally undulating, being covered mostly with fire-killed spruce, and in the hollows, tamarack swamps occur. Throughout the whole of the area from township 61 to this township fur-bearing animals are very numerous. Bears, minks, martens, muskrats, red, black and cross foxes, lynxes, wolves and otters are trapped in great numbers by the Indians. Moose are very plentiful and provide the greater part of the Indians' winter diet. Small birds are not numerous but partridges are very plentiful, and wild ducks and geese frequent these waters in summer. Whitefish abound in the waters of all the larger lakes, such as Sipiwesk, Cross, Playgreen and Butterfly lakes, and also in the Nelson river. For years Sturgeon were caught in large numbers in Sipiwesk lake and perhaps may still be plentiful, although the sturgeon fisheries which were in operation several years ago have since been abandoned.—G. H. Herriot, D.L.S., 1912.

The country in sections 25 and 36 is a succession of rock ridges interspersed with small spruce and tamarack swamps. The northeast corner of the township falls in Landing lake, which is a long narrow body of water about three quarters of a mile wide and thirty miles long. This lake is deep, and whitefish are plentiful. For information as to the minerals, game and climate of this locality, see the report on tp. 80-1-Pr.—B. W. Waugh, D.L.S., 1913.

(*East outline.*)—This township is fairly dry and rolling and the soil consists chiefly of clay loam with occasional outcroppings of rock. The valleys are swampy, but could be drained either southward towards Landing lake or northward towards Wintering lake. For information as to minerals, game and climate, see the report on tp. 80-1-Pr.—B. W. Waugh, D.L.S., 1913.

(*East outline.*)—Section 1 is much the same as the township to the south, but in sections 12 and 13 the rock outcroppings are more frequent. Sections 74. 24, 25 and 36 are a continuation of the burnt jackpine and spruce country already encountered in township 73, range 1, with occasional outcroppings and marshes, the soil being chiefly clay loam. In section 24 the surveyed line of the Hudson Bay railway was crossed. For information as to minerals, game and climate, see the report on tp. 80-1-Pr.—B. W. Waugh, D.L.S., 1913.

(*East outline.*)—In this township the burnt country changes to green spruce, poplar and jackpine from two to six inches in diameter. The country is lower than township 74, and contains more muskeg. The soil is chiefly black loam. For information as to minerals, game and climate, see the report on tp. 80-1-Pr.—B. W. Waugh, D.L.S., 1913.

(*North outline.*)—In section 36 of this range the line crosses Grass river. At 76. this point the banks are about fifty feet high and the current three miles per hour. The width of the river varies from five-eighths to half a mile and is here practically only the narrows between different parts of Partridge Crop lake. In section 32 there is a wide sluggish stream with a broad valley emptying into Grass river. The banks are low and muddy, the shore being covered with a dense growth of willow. The country is rolling, and having been burnt over about twenty years ago, is covered with second-growth jackpine. Brûlé is occasionally encountered. The valleys are broad and grown over with scrub spruce, willow and birch. The soil is a good clay loam with a subsoil of clay or gravel. For information as to minerals, climate and game, see the report on tp. 80-1-Pr.—B. W. Waugh, D.L.S., 1913.

(*East outlines.*)—A large part of these townships is taken up with Part-ridge Crop lake, so named on account of its shape. This lake is surrounded by high rock ridges covered with from four to eight feet of clay loam. Back from the shore of the lake there is considerable jackpine and spruce slash, and the country is rolling. For information as to minerals, game and climate, see the report on tp. 80-1-Pr.—B. W. Waugh, D.L.S., 1913.

(*East outlines.*)—The country in these townships is rolling and dry, 78 & 79. there being a succession of dry ridges running in a northeasterly direction. The timber is light, consisting mostly of willow and scrub poplar, and the soil is a fine clay loam. It is well drained by creeks flowing into Partridge

## TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

Crop lake and Grass river towards the south, except section 36 of township 79, which is drained northward into Burntwood river. There are practically no rock outcroppings and no timber of any value in these townships. For information as to minerals, game and climate, see the report on tp. 80-1-Pr.—*B. W. Waugh, D.L.S., 1913.*

*(East outline.)—Sections 1, 12 and 13 of this township lie in the valley of*

**80.** *Burntwood river and are occupied mostly by moss and spruce swamps interspersed with poplar and jackpine ridges. The banks of the river are about fifty feet high and have occasional rock outcrops. On the lower portion of the river there are only three falls; it being mostly wide and the current slow, but the upper part has many rapids. Loon lake, which is about eight miles long and from half a mile to a mile and a half wide, crosses section 24. Along the northern bank of this lake and to the west of the line there are some clay hills about 200 feet in height. Sections 25 and 36 are spruce ridges and tamarack swamps alternately, the soil being a fairly light clay. The only indications of minerals are seen in pegmatite dikes in the granite, containing pyrite, muscovite, chalcopyrite and molybdenite in small quantities. Some quartz veins were observed at Natawahunan lake, but in all cases they were found to be barren. A number of discovery claims have been staked in these places. Whitefish are plentiful in most of the lakes and large rivers, and in Grass, Odei and Nelson rivers sturgeon are found. In the autumn, during the freeze-up, caribou pass through the country around Split lake in herds, and it is no uncommon occurrence to hear of one man shooting as many as thirty in a day. Moose are plentiful in the Natawahunan lake district, and there are also a few bears. Foxes are the chief fur-bearing animals of the district, but minks, lynxes and wolves are also quite numerous. The summers in this country appear to be very short, the snow leaving about the latter part of April and coming again in October. Last summer was very wet and cold, and during August several frosts occurred. Towards the end of the winter the snow became very deep, being from three to three and a half feet. The winters are extremely cold, and weather with the mercury at forty degrees below zero is liable to remain from four to six weeks steadily.—*B. W. Waugh, D.L.S., 1913.**

*(East outline.)—The surface of this township is gently rolling. Sections 1,*

**81.** *12, 13 and 36 have been largely burned over. The timber is generally small, and in sections 24 and 25 there is considerable scrub. There is some timber, consisting of spruce and tamarack from four to seven inches in diameter, but it is rather scattered and not in sufficient quantities to be suitable for lumbering or pulp. The soil on the ridges is clay and heavy clay loam with muskeg and bog intervening. This township at the present time is about three-quarters under water during the spring break-up. Small ponds, bogs, swamps and marshes are very numerous, but no hay meadows were seen. A creek flowing in a northeasterly direction in section 24 is about thirty-five feet wide, from five to eight feet deep, and has a current of from one to four miles per hour, depending on the season. No coal, lignite, stone nor minerals of any description were noted. Frosts occur probably every month of the year. The snow-fall is very heavy, and there was from one to three feet of snow on May 1. The game consists of moose, caribou, wolves and foxes. This locality could be easily drained, as Odei river flows through the eastern part of the township to the east.—*A. H. Hawkins, D.L.S., 1914.**

*(East outlines.)—The surface of these townships is gently rolling and*

**82 & 83.** *has been largely overrun by fire. The soil consists of clay and heavy clay loam on the ridges with muskeg, peat and bog intervening, and will be unsuitable for farming until drained. No land is liable to flooding to any serious extent as all the streams have high banks. Swamps, marshes, bogs and ponds are quite numerous but no hay meadows were noted. Some rather fine patches of spruce are found along Odei and Meridian rivers, but there are no extensive areas such as would make lumbering profitable. Odei river, which averages from one and a half to two chains in width, and is from four to sixteen feet deep, flows in a southeasterly direction with a current of from two to three miles per hour. Meridian river has about the same width, depth and current as the Odei river, which it joins about half a mile to the east of the meridian. Water-power could be developed in township 82 as there are several falls from fifteen to twenty feet high. The slopes of all the valleys are very gradual. No coal, lignite nor other minerals were seen. Intrusive granite is apparently the cause of the rapids on the streams. Frosts occur probably every*

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month of the year with the possible exception of July. There was from one to three feet of snow on May 1. The weather is very cold during the winter months, and very warm during the season from June 20 to August 15. Game and fish do not appear to be plentiful. This whole district could be drained through the numerous streams if it were not for the fact that the soil seems to hold the water, and in places muskegs extend to within a few feet of a flowing stream, the bed of which is as much as ten feet lower.—*A. H. Hawkins, D.L.S., 1914.*

(*East outline.*)—The surface of this township is gently rolling and wooded.

**84.** There is probably less muskeg and marsh than in townships 82 and 83. The soil is clay and heavy clay loam on the ridges with marshes, muskegs and bogs intervening. No land is liable to flooding by the overflowing of streams but considerable water lies all over the surface after the spring break-up owing to the heavy snow-fall and the impervious nature of the soil. There is no hay land in the township. Some fair spruce and tamarack is found along the creeks and rivers but in limited quantities. Meridian river, which is from one and a half to two chains in width and has a current of from two to three and a half miles per hour, flows south, crossing the meridian several times. No rapids nor water-falls were found on this stream but there are many log jams. There is no coal nor lignite, nor any other kind of mineral. A ridge of granite was found in section 1. Frosts probably occur every month with the possible exception of July.—*A. H. Hawkins, D.L.S., 1914.*

(*East outlines.*)—The surface throughout these townships is gently roll-

**85 & 86.** ing and covered with spruce, tamarack, jackpine and poplar, with patches of poplar and willow brush along the creek valleys. The soil consists of clay and clay loam on the ridges with muskeg, peat, bog and marshy land intervening. The timber consists of spruce, tamarack and jackpine, measuring up to twenty-four inches in diameter, but being somewhat scattered it is not suitable for lumbering. Meridian river averages from one to two chains in width and has a current of from two to five miles per hour. Water-power could probably be easily developed from the rapids just south of the large lake crossed by the line in township 86. The slopes of the valleys are all gradual, and the height of the river bank varies from ten to fifteen feet. No minerals were noted. There are many boulders on the shores of the lake mentioned above, in the numerous rapids along the Meridian river, and also granite ledges in places, but no stone suitable for building purposes was seen. The winter in this district is long and severe with a snowfall of from three to five feet. The ground and also many of the trees are covered with moss. Frosts occurred each month of the year with the possible exception of July. Ice formed on the small ponds on August 20th. These townships are not suitable for farming unless properly drained.—*A. H. Hawkins, D.L.S., 1914.*

(*East outlines.*)—The surface of these townships is more rolling than

**87 & 88.** in the township to the south, and is wooded with spruce and tamarack with considerable willow scrub and windfall. The soil is clay and clay loam with sandy loam in places, and near the creeks many large granite boulders are found. No land is liable to flooding, but at the time of the spring break-up the large amount of snow, averaging from two to five feet in depth, leaves considerable water standing about in pools until the frost is out of the ground sufficiently to allow it to run off. Swamps, bogs, muskegs, small lakes and ponds are numerous throughout these townships. No hay land was seen. The timber is mostly small spruce and tamarack but there are occasional patches in which the timber varies up to seventeen inches in diameter. However, there is not a sufficient quantity for lumbering. File river, which flows in a northerly direction, is from thirty-five to fifty-five feet wide, from two to four feet deep, and has a current of from three to four miles per hour. Many rapids and log jams occur on this stream. The banks consist of clay and are from ten to fourteen feet in height. Many patches of thick willow and alder are found along the valley. No minerals were noted. The weather is very cold in winter with an average snowfall of from three to five feet. Frosts probably occur every month of the year with the possible exception of July. Game of all kinds appears to be rather scarce. Whitefish, lake trout and jackfish are said to abound in the larger lakes.—*A. H. Hawkins, D.L.S., 1914.*

## TOWNSHIPS WEST OF THE PRINCIPAL MERIDIAN.

## RANGE 2.

(*North outline.*)—The surface of this range is similar to that of range 1, with the exception that frequent rocky ridges break the sloping surface. The eastern part of the range is broken by a creek valley about sixty feet in depth. Sections 34 and 33 are broken by a shallow lake roughly one mile long by three-eighths of a mile wide. The lake is surrounded by a wide, open, floating muskeg. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—*G. H. Herriot, D.L.S., 1913.*

**72.** (See the report on tp. 72-1-Pr.)—*G. H. Herriot, D.L.S., 1913.*

(*North outline.*)—In sections 31 and 32 the line crosses a large shallow lake out of which a creek flows southward in the general direction of Paint lake on Grass river. The shore of this lake is very low and swampy and covered with a growth of red willow. It is gently rolling country covered with second-growth spruce, poplar and jackpine, the soil being clay loam with some humus. For information as to minerals, climate and game, see the report on tp. 80-1-Pr.—*B. W. Waugh, D.L.S., 1913.*

## RANGE 3.

(*North outline.*)—The eastern portion of this range is rendered bad by a large tamarack swamp. The first bay of Sipiwesk lake is encountered in section 35 and farther west two other bays are crossed. Township 69 is very much broken by Sipiwesk lake, while township 68 is more or less rolling, it being a succession of ridges and swamps. The soil and timber are very similar to ranges 1 and 2 except that the timber bordering the lake and on the islands is very dense spruce, jackpine, tamarack, poplar and willow. For information as to game, climate, water-powers and minerals, see the report on tp. 68-14-Pr.—*G. H. Herriot, D.L.S., 1913.*

(*North outline, ranges 3 and 4.*)—The country to the north of the base line is much broken by rock ridges which frequently rise fifty or sixty feet above the surrounding level. Adjacent to Wintering lake the Huronian rocks outcrop in many places. This lake has a most irregular shore line with two deep bays nearly eight miles long extending southwest. It is approximately sixteen miles long and from one to two miles wide. Many islands add to its picturesqueness. The soil in the less broken areas is clay, overlaid with moss. In range 4 a large moss swamp is encountered and occasionally this gives place to stretches of tamarack swamp. This range is therefore not suitable for agriculture. The soil in range 3, however, is much better and areas suitable for agriculture are found close to the right of way of the Hudson Bay railway which is crossed in section 35 of this range. McLaren's creek, which is about a chain wide and ten feet deep, traverses this range, draining McLaren's lake, which is about three miles long and half a mile wide, and discharges into Wintering lake. For information as to game, climate, water-powers and minerals, see the report on tp. 68-14-Pr.—*G. H. Herriot, D.L.S., 1913.*

(*North outline.*)—In this range the country is rolling with long high ridges in some of which the rock approaches quite close to the surface, and broad, deep valleys. In sections 31 and 32 muskegs are met with occasionally. The ridges are covered with second-growth jackpine and poplar, and the valleys with scrub spruce and an occasional tamarack. The soil is clay loam or humus with a clay subsoil. For information as to minerals, climate and game, see the report on tp. 80-1-Pr.—*B. W. Waugh, D.L.S., 1913.*

## RANGE 4.

(*North outline.*)—The country in this range is broken by the Nelson river and by Sipiwesk lake and Duck lake. The greater part of townships 68 and 69 in this range is made up of Bear island. The timber is very dense, small spruce, jackpine and poplar on the ridges, and spruce, birch and willow in the lowlands. The soil on the ridges is clay and is very suitable for agriculture. Sipiwesk lake is a fine body of water nearly ten miles long and from three to seven miles in width. Its surface is broken by many islands, large and small, which divide its waters into

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many channels, some of which have a very marked current. The many islands, although exhibiting a rocky shore line, are covered with a dense growth of spruce, some trees of which reach a diameter of from twelve to fourteen inches. For information as to game, climate, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

**72.** (See the report on tp. 72-3-Pr.)—G. H. Herriot, D.L.S., 1913.

## RANGE 5.

**68.** (*North outline.*)—Duck lake, Sipiesk lake and the Nelson river break the surface of this range. Elsewhere the surface is rolling and timbered on the higher levels with jackpine and in the hollows with small spruce. Larger spruce is to be found on the islands and also in a fringe along each water channel and lake. For information as to game, climate, water-powers and minerals, see the report on township 68, range 14.—G. H. Herriot, D.L.S., 1913.

The northwest corner of this township is crossed by the Hudson Bay railway. **70.** The soil consists generally of a heavy, sticky clay with a layer of loam in only a few places and is not suitable for most branches of agriculture. The surface is undulating. There is considerable swampy land covered with a deep layer of moss which prevents drainage, and is wooded with small spruce and tamarack. The dry land is covered with small timber which is very dense in places. No hay was seen. Water is abundant but of poor quality. There are no streams nor lakes of importance. No land other than that permanently swampy is liable to flooding. The climate is similar to that of northern Manitoba in general. Summer frosts are very probable. Considerable rain falls in summer, and the snowfall is unusually heavy in this vicinity. Wood is the only fuel available locally, but coal may be obtained from the railway. No coal or lignite veins, stone-quarries nor minerals exist. Moose are fairly plentiful, but small game is very scarce.—P. B. Street, D.L.S., 1914.

This township is reached by the Hudson Bay railway. The surface is mostly undulating and covered with small spruce, tamarack, birch and poplar. Probably two-thirds of the township is swampy. However, the drainage is good, and if the deep growth of moss were removed the land would probably drain itself naturally. The soil is mostly clay, and is not very good for agriculture. The timber is very small and scrubby in the swamp lands, and on the dry land it is rarely found over ten inches in diameter. No timber of commercial value for either lumber, railway ties or pulpwood is found. No hay was noticed. Creeks and lakes are numerous, and fairly good water can be had in abundance. The lakes are mostly shallow and of a swampy nature. No waterfalls nor rapids exist where water-power could be developed. Considerable rain falls in summer, and the fall of snow in winter seems to be heavier in this district than in any other portion of northern Manitoba. Summer frosts are probable. There is plenty of spruce, poplar, tamarack and jackpine in isolated patches on the dry land to supply fuel for future settlers. No stone-quarries nor minerals were noticed. Moose and small fur-bearing animals are fairly plentiful.—P. B. Street, D.L.S., 1914.

**72.** (*North outline.*)—This range is broken by Halfway creek, a stream about forty feet wide, with a marked current which flows northerly through section 35 and joins Grass river about four miles farther north. In section 31 a deep bay of the Grass river is crossed. The river here appears to be a series of long narrow lakes connected at the sides instead of the ends by a stream from fifty to one hundred feet wide. Where the stream is thus contracted the current is very swift, and falls of from ten to forty-five feet frequently occur. The banks are in many places almost perpendicular cliffs from ten to thirty feet in height. The surface throughout this range is rolling, rising at intervals into rock ridges. The soil on the ridges is rich clay wherever the rock does not outcrop, while in the hollows small muskegs occur. The general slope of the country is to the north, while the ridges run almost due north and south. In section 33 a marked ridge occurs and is covered with very good spruce from ten to twenty-four inches in diameter. Elsewhere the country is densely timbered with jackpine, spruce, poplar and tamarack. For information as to game, climate, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

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## RANGE 6

(*North outline, ranges 6 to 10.*)—Passing through range 10 travelling east, the

- 36.** jackpine ridges disappear entirely, and the country becomes almost impassable.

In ranges 9, 8, 7 and 6 moss covers the ground to a depth of from two to four feet. The bogs are wooded with stunted tamarack. There are many small lakes in this district, and the ground is such that a small pressure on the surface will expose water. It was very difficult to find sufficient solid ground in range 8 on which to camp. The whole range, as well as ranges 9 and 7, had to be corduroyed in order to get our horses to the bank of the Warpath river in range 7. Ranges 8 and 9 are wooded with spruce and tamarack only, but these are of no commercial value. The grass along the Warpath river is the only feed of good quality obtainable along this line travelling east from range 14. Between the river in range 7 and lake Winnipeg, there is a large tamarack swamp streaked with floating bog. This tamarack is large and would be suitable for ties. One of the striking features of this country is the absence of creeks and rivers. From range 10 to range 7 there is not a river except the Warpath, but in one or two bogs water was flowing quite rapidly through the grass over the whole surface. Although the Warpath river is sixty feet wide and the current is from three to three and a half miles per hour it does not seem to drain the country through which it flows. No doubt the depth of the moss in the bogs prevents the water from flowing freely out of them. During the latter part of June and the early part of July the heat was intense; no summer frosts were noted. The lakes were open till November 5th. The first frost occurred on September 14 and 15, when thin ice was formed on the standing water in the swamps. Although there are large gypsum deposits north of the ninth base no traces of this or any other mineral were seen in this district. Moose and caribou are very plentiful. Traces of lynxes were found, and minks, otters and muskrats are numerous along the Warpath river. Only a few traces of bears were seen. Jackfish are abundant in the Warpath river.—*T. H. Plunkett, D.L.S., 1912.*

(*North outline.*)—This line follows a narrow channel of Sipiesk lake. To

- 68.** the north there is some fine land covered with small poplar, spruce and jackpine.

It could be cleared easily and is very suitable for agriculture. To the south of the base line the Muhigan river enters Sipiesk lake from the southwest. By following the windings of this river and making two long portages it is possible to reach Resting lake. A third portage, one and a half miles long, from this lake leads to the southeast shore of Setting lake. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—*G. H. Herriot, D.L.S., 1913.*

This township may be reached either by the Hudson Bay railway or by way

- 70.** of Halfway lake and Grass river. There is very little soil of value for agriculture in this township. The surface is generally rolling, and rocky ridges are

numerous. There is considerable swamp land covered with scrubby timber of no value whatever. A few good spruce varying from eight to eighteen inches in diameter are found in the southern parts of sections 4 and 5. No hay sloughs were noted. Halfway lake, Monty lake and Rocky lake have good water, but that contained in Tooth lake and Leech lake is of very poor quality. No water-power can be developed. Considerable rain falls in this district, and the snowfall is heavier in this vicinity than anywhere else along the Hudson Bay railway. Summer frosts are very probable. Wood for fuel is plentiful but there is no coal. No stone-quarries nor minerals were noted. Moose are fairly plentiful, and whitefish and jackfish are found in Halfway lake.—*P. B. Street, D.L.S., 1914.*

(*North outline.*)—The country in the eastern half of this range is very similar

- 72.** to that of range 5, but the western half is more rocky, with more muskeg between the rock ridges. The line crosses another bay of Grass river in section

34. The western two miles of this range are practically all muskeg, covered in places with water from one to two feet deep. The soil on the ridges is clay loam, but in the swamps this is covered with from one to two feet of moss. For information as to game, climate, water-powers and minerals, see the report on township 68, range 14.—*G. H. Herriot, D.L.S., 1913.*

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## RANGE 7

(*North outline.*)—In the eastern half of this range lies a fine ridge of poplar  
**68.** about two miles wide and extending perhaps one and a half miles to the south  
 and probably fifteen miles to the northeast. The soil across this range is a  
 fine clay loam, very suitable for farming. This area is without doubt the best strip of  
 land met with during the season. In the western half of the range the land, although  
 rising, is covered with spruce, the clay loam being overlaid by several inches of moss.  
 Muskeg is found in the low places. Muhigan river traverses the range from west to  
 east about six miles south of the base line. For information as to climate, game,  
 water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S.,  
 1913.

(*East outline.*)—This township is crossed by the Hudson Bay railway. The  
**69.** surface is generally swampy with the exception of the southeast portion which is  
 rolling land, fairly well drained. The timber is small and of no value. No  
 hay meadows were found. However, in sections 1 and 12 there is good pasture on the  
 hillsides. The creeks are numerous and contain good water. No water-power can be de-  
 veloped. The climate is similar to that of northern Manitoba in general. Summer frosts  
 are probable. Wood for fuel may be procured from the numerous patches of spruce, birch,  
 tamarack, jackpine and poplar. No coal nor stone-quarries were noted. No minerals  
 were found although the compass was extremely erratic and the presence of magnetic  
 iron is probable. Moose are plentiful but no other game was noted.—P. B. Street,  
 D.L.S., 1914.

(*Subdivision.*)—This township is reached by the Hudson Bay railway which crosses  
 sections 18, 19, 30, 29, 28, 33 and 34. The soil is usually of clay with occasionally a  
 top-soil of peat. Much of the land in this township appears suitable for agriculture,  
 but about fifty per cent. of it would require drainage. The best is found in sections  
 5, 6, 7, 17, 20, 28, 29, 30, 33 and 34. There are, however, areas of dry land in almost  
 every section. The surface of the township is rolling, and is covered for the most  
 part with a thick growth of small spruce, jackpine and tamarack. There are consider-  
 able areas of swamp, but this township is much drier and higher than most of the  
 country in this locality. There is a small quantity of spruce, tamarack and jackpine  
 in sections 4 and 5 which would be suitable for ties or lumber. A large number of  
 ties have been cut in sections 28, 29 and 31 around Halfway lake, and about 300,000  
 feet of lumber could still be cut here from the trees which were too large for tie-making.  
 From fifty to one hundred tons of hay could be obtained along the creek in sections  
 19 and 30. The water in the lakes, streams and swamps is fresh and of good quality,  
 and the supply is both abundant and permanent. The creek which crosses sections  
 18, 19 and 30 empties into Halfway lake. This stream is from thirty to one hundred  
 feet in width and from two to four feet in depth, and has a current of about half a  
 mile per hour. A small creek which drains Lucy lake through sections 34 and 35 is  
 about six feet wide, two feet deep, and has a current of about one mile per hour.  
 Parts of sections 18 and 19 appear liable to be flooded to some extent. The land so  
 flooded, however, is swampy and of no value for agriculture. There are no water-  
 powers nor sites for dams in this township. The climate appears similar to that of  
 other parts of Manitoba in the same latitude. Wood, which is everywhere plentiful,  
 is the only fuel available. Stone, consisting chiefly of granite, could be quarried in  
 sections 25, 26, 35 and 36. No minerals of economic value are known to exist. There  
 are a few moose and caribou. Minks and foxes are numerous and there are many  
 muskrats around Lucy lake. Ducks, partridges and rabbits are also very plentiful,  
 Whitefish and jackfish are found in Halfway lake.—P. E. Palmer, D.L.S., 1914.

This township is reached by the Hudson Bay railway, which runs through sec-  
**70.** tions 3, 2 and 1, Pesim siding being in section 2. The soil is usually a clay,  
 but in many places there is a deposit of peat overlying the clay. About forty  
 per cent. of the area of this township is suitable for agriculture, and much of the re-  
 mainder could be readily drained. The soil, however, appears to be wet and mucky  
 in most places. Oats, barley and wheat, which had been spilled from loads of freight,  
 grew and ripened in section 2 last summer. The surface is rolling, consisting of ridges  
 of clay or rock with swampy areas intervening, and is covered with small spruce, tam-  
 arack, birch, poplar and jackpine, none of which is of a size suitable for lumber.

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There is no hay. The water is fresh and of good quality, and the supply is abundant, permanent and everywhere available. There are no water-powers nor sites for power dams. The climate appears similar to that of other parts of Manitoba in the same latitude. Wood, which is everywhere obtainable, is the only fuel found in the township. Stone, consisting mostly of red granite, could be quarried in almost every section. No minerals of economic value have been discovered. Moose and caribou are occasionally seen in this locality. Foxes and minks are numerous, and ducks, partridges and rabbits are fairly plentiful. Whitefish and jackfish are found in Half-way lake.—*P. E. Palmer, D.L.S., 1914.*

(*North outline.*)—This range is much broken by rocky ridges. Several small

- 72.** lakes could be seen to the south of the base line. The muskeg between the ridges was deeper and wetter than at any time earlier in the season owing no doubt to the heavy rains and snow-storms in the latter part of September and the early part of October. For information as to game, climate, water-powers and minerals, see the report on township 68, range 14.—*G. H. Herriot, D.L.S., 1913.*

## RANGE 8.

This township may be reached by trail from Sandy bay or from Gypsumville,

- 33.** the present terminus of the Canadian Northern railway. The trail from Gypsumville is impassable in wet seasons. There is good prospect of a good road being made from Gypsumville in order to exploit the marble quarry in section 10. The best agricultural land is in the southwestern corner, but there is also some very good land in sections 19, 20, 29 and 30, and also southeast of Gypsum lake. Much of this township is marshy and boggy, and there are also large areas covered with deep moss and small timber. The good land is covered with large timber which is mostly poplar, and some spruce in sections 19 and 30. This timber is valuable only for fuel and building purposes for the settlers. The land is quite even and level, with the exceptions of Gypsum hills in sections 4, 3, 2, 11, 12 and 13, a limestone ledge in section 10 and low ledges of igneous rock in sections 25 and 36. Despite the great areas of marsh land, there is probably no hay land in the township. The portion between Gypsum lake and the western boundary is quite worthless, in most places having a floating surface. The township is well watered, good water being available everywhere in shallow wells. Some alkaline water was found in section 4 at the foot of the Gypsum hills. The water in the lake is fresh and good. There are no rivers. The climate is pleasant, especially in summer, though still subject to early and late frosts. No minerals were observed other than gypsum. There is said to be a good marble quarry in section 10; it is being exploited for material for tombstones at the present time. Game is very plentiful. Moose, caribou, deer, partridges and prairie-chickens were all observed, and tracks of minks, weasels, otters, foxes and wolves were seen in the snow. The lake is well stocked with fish.—*M. Pequegnat, D.L.S., 1911.*

(*East outline.*)—This line follows a dry jackpine ridge, the trees ranging from

- 34.** six to eighteen inches in diameter and growing thickly. About two miles west of this line there was found a limited quantity of excellent spruce and tamarack, probably about two square miles. This timber lies approximately in sections 10, 11, 14 and 15 of this township. The soil on the ridge is light and sandy, but west of that in the spruce, it is good. For information as to climate, minerals and game, see the report on township 36, ranges 6 to 10.—*T. H. Plunkett, D.L.S., 1912.*

(*Subdivision.*)—This township may be reached from Gypsumville, the terminus of the Oak Point branch of the Canadian Northern railway, by dog sleighs in winter, and by trail in summer, the distance being about nine miles. The surface soil of the wet land is composed of peat and muck, and where dry, it is stony clay with a stony clay subsoil. The low land when drained will be suitable for growing grass and grain. The surface is nearly level, and is to a great extent swampy. A considerable quantity of stunted spruce and tamarack is found and there are many open places which are generally very wet. In the east half of section 27 there is spruce and tamarack large enough for lumbering purposes—in all about 1,000,000 feet. No hay was seen. Water is abundant in the swamps and will be permanent until the land is drained. There

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are no streams and no water-powers. No summer frosts occur. Wood for fuel is available in almost every quarter-section. No coal nor minerals were seen. No stone suitable for quarrying was observed, although the limestone rock is probably very close to the surface in places. Moose, caribou and rabbits are plentiful. This township will require to be drained before much of it is available for settlement. However, three or four sections at the southeast corner contain some dry land suitable for homesteads.—*J. Francis, D.L.S., 1914.*

The southwest corner of this township may be reached by a wagon trail from  
**35.** Gypsumville, a station on the Canadian Northern railway in township 32, range 9. This trail may be travelled throughout the summer months as there are very few soft places. The soil is largely peat and muck over a stony clay subsoil, and when drained will grow good crops of grain and grass. The surface is nearly level, and is composed of open swamps with birch, willow and dwarf tamarack, and areas of moss-covered land on which there is a stunted growth of spruce and tamarack. There is very little timber suitable for lumber, a few trees along the river being all that is obtainable. No hay was seen. All water is fresh and of good quality. The Warpath river rises in the township to the west and flows southeasterly through this township. This stream has an average width of about forty-five feet and a depth of about one foot. The current is very slow and the banks are only about three feet high. In extremely wet years the greater part of this township is flooded. There are no water-powers. The water supply is not permanent. No summer frosts occur. Considerable quantities of fuel may be obtained from the small spruce and tamarack growing in every quarter-section. There is no rock suitable for quarrying and no minerals were seen. Moose, caribou and rabbits are plentiful. This township will require systematic drainage before much of it is suitable for settlement.—*J. Francis, D.L.S., 1914.*

(*East outlines.*)—The country in these townships is not suitable for  
**35 & 36.** farming. Swamp, bog and moss are continuous and the spruce and tamarack back from the river is small and of no commercial value. For information as to minerals, climate and game see the report on township 36, ranges 6 to 10.—*T. H. Plunkett, D.L.S., 1912.*

**36.** (*North outline.*)—(See report on tp. 36-6-Pr.)—*T. H. Plunkett, D.L.S., 1912.*

(*North outline.*)—The Hudson Bay railway right of way cuts across this line  
**68.** in section 35 in a northeasterly direction. The railway dump is practically completed to a point about ten miles north of this crossing, a distance of nearly 150 miles from Pas. The most westerly of a group of three lakes is crossed in section 34. The two larger of these lakes lie one on each side of the right of way and are one and a half miles wide and from three to four miles long. The northwest corner of this township falls within Setting lake. Between these lakes and Setting lake the country is very rolling and is broken frequently by rock ridges timbered with jackpine, while the hollows are covered either with dense small spruce or spruce of a fair size, some being from twelve to fourteen inches in diameter. A considerable amount of fine, clean spruce, suitable for tie making, is found around these lakes. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—*G. H. Herriot, D.L.S., 1913.*

(*Subdivision.*)—This township is reached by the Hudson Bay railway which crosses sections 18, 19, 20, 29, 28, 27, 34 and 35. The divisional point of Bowden is to be located in sections 20, 28 and 29, where clearing for yards has already been done. The soil is usually a clay covered with a thin deposit of peat or muck. A considerable portion of the land in this township might be suitable for agriculture after a little drainage. The best of the land is found in sections 27, 28, 29, 34 and 35. About thirty per cent of these sections is fairly dry, and more could be easily reclaimed. The surface is usually slightly rolling and is covered for the most part with tamarack and spruce, with birch, spruce and jackpine near the lakes. About 30,000 ties have been recently cut in this township and there are still a few to be had in sections 7, 8, 17, 18 and 21. There was a good growth of spruce and tamarack at one time between Bowden and Rock Island lakes, but this has been destroyed by fire. A few ties of spruce and tamarack could be cut in section 32. The remainder of the township is covered with spruce, tamarack, birch and jackpine, which is as yet too small to be of

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value. A small quantity of hay can be cut along the north shore of Rock Island lake. The water in this township is fresh and of good quality, and the supply is both abundant and permanent. The creek which drains Rock Island lake is about thirty-five feet in width and from two to three feet deep, and has a current of about half a mile per hour. No lands liable to flooding were observed. There are no water-powers nor sites for power dams. The climate does not appear to differ from that of other parts of this district. Wood, which is everywhere obtainable, is the only fuel in this township. Granite can be quarried in sections 19, 28, 29, 31, 32 and 33. There are no minerals of economic value. Moose, caribou, partridges, ducks and rabbits are found in this township but are not abundant. Foxes were very plentiful and there are many minks and muskrats. Whitefish, jackfish, pickerel and mullet are caught in Setting and Bowden lakes.—P. E. Palmer, D.L.S., 1914.

This township is reached by the Hudson Bay railway which traverses sections

**69.** 1, 2, 12 and 13. Niski siding is in sections 12 and 13. The surface is usually a slightly rolling swamp broken with small ridges and hillocks of a peaty formation and covered with thick, small spruce. These swamps are lightly wooded with spruce and tamarack from four to eight inches in diameter. There are some ridges of clay on the eastern side of the township which are covered with a thick growth of jackpine and spruce up to eight inches in diameter. There is no timber of commercial value. The soil is usually from six to thirty-six inches of peat or muck overlying a clay subsoil. There are quite extensive areas of clay in sections 1, 2, 3, 12, 23, 24 and 36, which might be suitable for some sort of agriculture. Probably about thirty per cent of the land in these sections could be cultivated at present. This township, however, could be easily drained as there is a creek flowing through sections 2, 11, 12, 13, 24 and 25. This stream is about twenty-five feet in width and from three to five feet in depth and has a current of about one mile per hour. It runs in a very crooked course from Rock Island lake in the township to the south to Halfway lake in township 70, range 7. The banks are marshy and thickly covered with willows in most places. Through sections 24 and 25, however, it runs through a valley of about twenty feet in depth. A small quantity of hay, probably about 100 tons, can be cut along the banks of this creek. This is the only hay available in this township. Wetmore lake, which lies in sections 23 and 24 averages about eight feet in depth. The shores, except the points which are of rock, are marshy and there is no evidence of any decided variation in depth from one season to another. It is drained by a small brook which flows into the large creek before-mentioned. There is no timber of commercial value. The water of the township is uniformly fresh and of good quality, and the supply is abundant and appears permanent. There are no water-powers nor were any suitable sites for dams observed. The climate appears similar in its general features to that of other parts of Manitoba in the same latitude. Wood, which can be procured everywhere, is the only fuel available. There are large reefs of granite in sections 23 and 36 which would be suitable for quarrying. Engineers report that the granite in this locality is particularly hard. No minerals were observed. Discrepancies in the reading of the magnetic needle would indicate the presence of iron ore in the vicinity. The game consists of moose, caribou and bears, which are not plentiful; rabbits, partridges, ducks and ptarmigans, which are fairly plentiful; and foxes, minks and muskrats, which are numerous.—P. E. Palmer, D.L.S., 1914.

## RANGE 9.

This township may be reached by what is known as the 'Hunter's' or 'Muskeg'

**33.** trail, which follows the 'Big Muskeg,' a strip of low land about a mile wide, through the second tier of sections from the west. This trail is impassable in wet seasons.

A better trail might be made by cutting through a forest north from Gypsumville, and this will be done no doubt in the near future. Gypsumville, the present terminus of the Canadian Northern railroad, is only two miles distant from the southern boundary of this township. The soil is nearly all good, with the exception of some marshes. The township is covered with forest. West of the 'Big Muskeg' the timber is young and small, though growing quite thick, but east of the muskeg it is large and suitable for cordwood. There is some large valuable white spruce, eighteen to twenty-four inches in diameter, but not in sufficient quantity to attract timber men. There are several sections of bush from which railway ties could be cut from the largest of the timber. Wood for fuel is plentiful everywhere. There are no rivers,

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and consequently no water-powers. The surface is quite level and even, there being practically no hills. Portions are slightly rolling and there seems to be plenty of grade to give drainage, as the water pours down over the 'Big Muskeg' in wet seasons. The marshes produce luxuriant hay, but some of them are so wet that the hay cannot be cut. The soil is good and suitable for general farming. Water is plentiful everywhere, and in general is of good quality. Some alkaline water was noticed at the edge of the 'Big Muskeg,' but a clay well a few feet away gave good water. No minerals nor quarries were observed, except the gypsum in section 2, which is a continuation of the gypsum hills running north from township 32, range 9. Game is quite plentiful, moose, bears, prairie-chickens and partridges all being observed while surveying. The climate is pleasant, especially in summer, though still subject to early and late frosts.—*M. Pequegnat, D.L.S., 1911.*

**34.** This township can be reached by a wagon trail from Gypsumville, a station on the Canadian Northern railway in township 32, range 9. This trail enters the township in section 4 and leaves in section 36, and is passable throughout the year. The soil is composed of peat and muck in the swamps, and a stony or gravelly clay on the higher parts. The surface is almost level and swampy with the exception of a strip running from section 4 to sections 35 and 36, which is undulating, stony, and covered with partly fire-killed pine, spruce and poplar, which is unsuitable for either ties or lumber. The swamp land is generally covered with scrubby spruce and tamarack suitable only for fuel. There is no hay. The low land when drained will grow grass and all kinds of grains. The water in the swamps is fresh and the supply permanent. There are no streams and no water-powers. No summer frosts occur. Wood for fuel is found in every section. No minerals nor stone suitable for quarrying were noted. Game is plentiful and consists of moose, caribou, rabbits and partridges.—*J. Francis, D.L.S., 1914.*

**35.** A wagon trail from Gypsumville, in township 32, range 9, passes about thirty chains east of the southeast corner of this township. This trail is passable throughout the year. The soil in the swamps is peat, and on the high land there is a stony clay. The surface is nearly level and is inclined to be wet and boggy. Between the boggy swamps considerable areas covered with small poplar or small spruce and tamarack are found. Sections 1, 5, 6, 7, 8, 12, 21, 28, 33, and the east halves of sections 22, 29 and 32 contain the high land and are generally covered with poplar, spruce and tamarack. There is no timber of value. No hay was found. The water is good, plentiful, and will be permanent until the swamps are drained. Warpath river rises in section 26 of this township. There are no water-powers. No summer frosts occur. Wood for fuel is plentiful in the sections mentioned above. No stone suitable for quarrying nor minerals of economic value were noted. Game is plentiful and consists of moose, caribou and rabbits. This township will require extensive draining before much of it is suitable for settlement.—*J. Francis, D.L.S., 1914.*

**36.** There are no trails nor routes leading to this township in summer. In winter the long open swamp which extends through the western halves of townships 33, 34 and 35, range 9, could be utilized for sleigh traffic. The soil is composed of either peat or gravelly clay according as the land is wet or dry. The swamps when drained will make very desirable land for the growing of grain and grass. The surface is in general very level and it is to a large extent covered with from one to two feet of moss and a growth of stunted spruce and tamarack. There is no timber worth conserving for lumber or railroad construction purposes. Between the many swamps where the land is slightly drier many bluffs of spruce, tamarack and poplar up to six inches in diameter are found. These bluffs occur with a few exceptions in almost every section. There is no hay, the swamps being too wet or covered with moss to grow grass of a quality suitable for hay. All water is good, and the supply will be abundant until the large swamps are drained. There are no streams and no water-power can be developed. No summer frosts occur. The summer of 1914 was very dry. Wood for fuel is plentiful in every section. No minerals nor bed rock suitable for quarries were observed. Caribou, moose and rabbits are very plentiful. The township will have to be drained before much of it is available for settlement.—*J. Francis, D.L.S., 1914.*

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(*North outline, ranges 9 and 10.*)—The soil from Lily lake in range 9, to

- 64.** Muningwari lake in range 10, is mostly clay loam and is covered with spruce and poplar. On the west side of Muningwari lake and extending for one mile in a westerly direction and nearly five miles north and south, there is a belt of good spruce and jackpine from six to ten inches in diameter. The soil is sandy. The remainder of range 10 is very wet and covered with small spruce and tamarack. For information as to climate and game, see the report on township 60, range 14.—O. Rolfson, D.L.S., 1913.

This township is reached by the Hudson Bay railway which crosses sections

- 67.** 6, 7, 8, 17, 20, 21, 28, 27 and 34, Pipoon siding being in section 34. The soil consists usually of peat overlying clay. There are small areas which might be cultivated at present, but drainage will be needed to make any considerable area of value. There are extensive sand ridges in sections 9, 15 and 16. The surface is usually slightly rolling, and is for the most part covered with small spruce and tamarack. There is a large quantity of good spruce, jackpine and tamarack in sections 9, 15 and 16; probably about 1,000,000 feet of lumber and many ties could be cut in sections 7 and 8. There is no hay in this township. The water is fresh and of good quality, and the supply is widely distributed, abundant and apparently permanent. There are no water-powers nor sites for dams. The climate has no distinguishing features from that of other parts of Manitoba in the same latitude. Wood which can be obtained in all parts of the township is the only fuel available. A good quality of granite could be quarried in sections 19, 20, 29 and 33 along Setting lake and also in sections 5 and 6. No minerals of economic value were observed. Game is not very abundant. Traces of moose and caribou were seen. Foxes, minks and lynxes are fairly plentiful and there are also a few otters and martens. Rabbits are numerous and a few partridges and ptarmigans were seen.—P. E. Palmer, D.L.S., 1914.

(*North outline.*)—This range is somewhat broken by Setting lake and Grass

- 68.** river. Setting lake, a narrow, rock-bordered lake, extends roughly in a north-easterly and southwesterly direction. It is probably one and three-quarter miles wide and twenty-five miles long. Grass river enters Setting lake about the middle of the west side, and Kiski creek, draining Kiski lake, enters from the south. The waters flow northeast through the continuation of Grass river. Grass river, in this range, is a stream about fifteen chains wide with a marshy shore line. In the western part of the range the land is higher and is broken at intervals by rocky ridges, covered with jackpine. The intervening hollows are wet and covered with small spruce, willow, tamarack and birch. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

- (*Subdivision.*)—This township is reached by the Hudson Bay railway, which crosses sections 3, 2, 11, 12 and 13. The soil is usually a peat of from six to eighteen inches in depth overlying clay. There are considerable areas of clay land along Setting lake, but they do not extend far back from the shore. There is but little land in this township that could be cultivated at present. Drainage, however, would not be difficult as the swamps are of no great depth. The surface is slightly rolling and consists of swamps and muskegs separated by rock or clay ridges. Much of the southern portion of this township has recently been burned over. There is some timber suitable for ties in section 13 but there is not a very large quantity. There is no hay. The water is fresh and of good quality, and the supply is abundant and appears permanent. There are no water-powers nor sites for power-dams. The climate appears similar to that of other parts of Manitoba in the same latitude. Wood which is plentiful everywhere is the only fuel available. No minerals of economic value were noted. In nearly every section of this township there are ridges of granite from which unlimited quantities of stone could be quarried. Game is not very plentiful. Traces of moose were seen and a few lynxes and muskrats. Minks and foxes are plentiful, and there are a few partridges and ptarmigans. Whitefish, jackfish, pickerel and mullet are caught in large quantities in Setting lake, several car-loads having been shipped last winter.—P. E. Palmer, D.L.S., 1914.

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## RANGE 10.

**33.** This township may be reached by trail from the Hunter's or Muskeg trail in the adjoining township to the east, which gives connection with Gypsumville, the present terminus of the Canadian Northern railway. The trail is impassable in wet seasons. The township may also be reached from Old Gypsumville on lake Manitoba, by the trail cut in surveying this township and the adjoining one to the south. This trail is passable any time of the year, but it leads in from a deserted village which has neither rail nor steamboat connections since the Manitoba Gypsum Company abandoned their lake route. The surface of the township is level, except for several narrow sand ridges. The soil is very good, being nearly all a light loam, but it has a very light subsoil with gravel and gravelly clay which will not make first-class farming land. It is timbered with small tamarack and jackpine, but there are small areas of larger timber, chiefly jackpine, from six to twelve inches in diameter. There is but little hay land in this township, the numerous open spaces in the forest being covered with low scrub or buffalo willow. Much of the land is liable to be flooded in wet seasons, but the water disappears in the course of a few weeks. Good water was plentiful in shallow wells last season, but would probably be quite scarce in very dry seasons. There are no rivers. Wood for fuel is plentiful everywhere. There were no indications of any mineral. There is a low ledge of limestone running northeasterly through sections 3, 17, 16 and 21, with its best outcrop in section 21, where building stone might be quarried. The stone is apparently good though somewhat amygdaloidal at the surface, but it is improbable that this condition would extend more than a few feet into the ledge. Game is plentiful, moose, caribou, deer, bears, partridges and prairie-chickens being observed. The climate is pleasant, especially in summer, though subject to early and late frosts.—*M. Pequegnat, D.L.S., 1911.*

**36.** (*North outline, ranges 10 to 14.*)—The country along the base line throughout these ranges is a regular succession of floating bogs in which there was considerable open water and ridges. The ridges in range 14 are generally suited to agriculture, but in summer they are practically inaccessible. The soil in these ridges is of a fair quality, but throughout the remainder of the territory the ridges are very stony. There is a decided slope to the land and the bogs no doubt could be drained. It has been the experience of farmers, who have drained similar bogs, that they make excellent farm land. Their depth varies greatly; in some of them, midway between the bordering ridges, a solid clay, carrying boulders at four feet deep, was found, while in others a pole sixteen feet in length could be pushed down easily and no bottom reached. They occupy roughly from sixty to seventy-five per cent of the whole country. The ridges in range 14 were wooded with merchantable spruce, poplar and birch. In ranges 13, 12, 11 and 10 the predominating timber is jackpine, spruce and tamarack of no commercial value. For information as to climate, minerals and game, see the report on township 36, ranges 6 to 10.—*T. H. Plunkett, D.L.S., 1912.*

(*Partial.*)—This township is reached from the Hudson Bay railway which crosses the township to the north. There are no trails from the railway but it is possible to reach the township with canoes by way of Woody creek and Otter lake with but one portage of a quarter of a mile. The surface of the township is generally swampy and not suited to agriculture. The south portion of the east outline of the township is occupied by Muningwari lake which is about three and one-half miles long and from one-quarter to three-quarters of a mile wide. The water is fresh and of good quality. Along the creek which flows in a southeasterly direction along the east outline into Muningwari lake there is some fair timber consisting of spruce and tamarack up to twenty-four inches in diameter; probably 300,000 feet of lumber could be cut here. To the north of this timber the east outline passes through a strip of rolling land covered with jackpine up to fourteen inches in diameter. This strip is about a mile wide and appears to be very well suited to agriculture. There is a very large number of ties here but the distance to the railway is too great to render logging profitable. Along the east boundary of sections 24 and 25 the land is generally swamp. In section 36 there is another jackpine ridge extending about a mile west of the line and a short distance to the east. The north boundary of section 31 crosses Otter lake. This lake is from two to twelve feet deep and contains fresh water of good quality. The country to the east of the river

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is rolling and consists of small ridges and swamps. It is of no value for either the timber or for agriculture. Game is fairly abundant, and consists of moose, caribou, wolves, otters and foxes. Ducks are plentiful around the lakes.—P. E. Palmer, D.L.S., 1914.

This township is reached by the Hudson Bay railway which crosses sections 66. 6, 7, 8, 9, 16, 15, 22, 26, 35 and 36. Winston siding is located in sections 26 and 35. The soil of the township is usually peat or muck, and is not suited to agriculture. Rock outcrops in many places. The surface is usually rolling and is covered with small spruce, tamarack and jackpine. Most of the land in this township is swamp broken with rock ridges some of which are twenty-five or thirty feet in height. The largest of these ridges occurs in sections 24 and 25. About 50,000 ties of spruce and tamarack could be cut along the north boundaries of sections 8, 9 and 10, but other than this there is no timber of value in the township. There is no hay. The water is fresh and of good quality, and the supply appears to be abundant and permanent. Woody creek flows through sections 6, 7, 8, 17, 20 and 21. There is a fall of about twenty feet on this creek in section 6, but the volume of water is not sufficient for power purposes. This creek has its source in Otter lake and empties into Kiski lake. It is from eighty to one hundred and twenty-five feet in width, from two to eight feet deep, and has a very slight current. Its course is very crooked. Through 6 and 7 the valley is from fifteen to thirty feet deep, but to the north it runs through open marsh. This stream is navigable for canoes with but one small portage before reaching Otter lake. There are no water-powers. The climate has no distinguishing characteristics. Wood which is the only fuel available can be obtained everywhere. Stone can be quarried in nearly every section, but particularly in sections 24 and 25 where there are large quantities of granite. No minerals of economic value have been discovered. Game does not appear to be plentiful. A few traces of moose and caribou were observed, and foxes, minks, muskrats and lynxes are occasionally encountered. Ducks are plentiful, and rabbits and partridges are fairly numerous. Whitefish, jackfish and mullet are taken in considerable quantities from Kiski lake.—P. E. Palmer, D.L.S., 1914.

(Partial.)—This township is reached by the Hudson Bay railway which crosses 67. section 1. Sections 1 and 12 and the east outline of the township were the only portions surveyed. The soil consists of peat or muck overlying clay, and at present is not suitable for agriculture. The surface is slightly rolling and is covered for the most part with small spruce and tamarack. A considerable number of ties could be cut in the vicinity of Kiski lake. A large marsh is found along Kiski creek, but it is too wet to be suitable for hay growing. There is no hay in this township. The water is fresh and of good quality, and the supply appears to be abundant and permanent. There are no water-powers, stone-quarries nor minerals of economic value. The climate appears similar to that of other parts of Manitoba in the same latitude. Wood which is abundant is the only fuel available. The game consists of a few moose, caribou, foxes, minks and lynxes. There are also many muskrats along Kiski creek. Ducks are abundant in summer. Whitefish, jackfish and mullet are caught in Kiski lake.—P. E. Palmer, D.L.S., 1914.

(North outline.)—A large stream with several marshy lake expansions crosses 68. this line and flows southerly into Pakwa lake, near where the Grass river enters it from the west. The eastern portion of this range is fair land, covered with spruce in the low parts and jackpine and poplar on the ridges. The soil is clay overlying rock on the high lands, with peaty muck overlying the clay in the hollows. The western portion is largely tamarack swamps broken at intervals by rocky ridges. The swamps have the appearance of being very wet and would be practically impassable in the summer. For information as to game, climate, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

(East outline.)—This locality was reached from the Hudson Bay railway with dog teams over a trail from Pipoon siding to Setting lake, thence across this lake and a short portage to Pakwa lake, and thence north over the ice. The country traversed by the east boundaries of sections 36 and 25 is rolling, consisting of ridges of clay or rock and swamps covered with small spruce, tamarack, birch, poplar and windfall. The east boundaries of sections 24, 13 and part of section 12 lie in Pakwa lake; the remainder of the east boundary of section 12 crosses a rolling country covered with a

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thick growth of small spruce. The country along the east boundary of section 1 is slightly rolling, and near Setting lake there is a large quantity of spruce, tamarack and birch up to eighteen inches in diameter. About 2,000,000 feet of lumber could be cut here. Grass river which crosses the east boundary of section 25 flows in an easterly direction into Pakwa lake and then from Pakwa lake to Setting lake. It is about 200 feet in width, about ten feet in depth, and has a sluggish current. The water is fresh and of good quality. The shores are marshy. Pakwa lake is about eight miles long and from two to three miles wide. The water is fresh and of good quality, and is about thirty feet in depth. The shores are irregular and rocky.—P. E. Palmer, D.L.S., 1914.

## RANGE 11.

This township may be easily reached in winter by sleighs by way of St. Martin's and Belton's homestead, and thence by a survey road. The soil is a stony clay loam and might be used for mixed farming. The surface is wooded with poplar, tamarack and spruce of small diameter, suitable only for fuel or building. Hay is found everywhere in the many sloughs. The muskegs contain an abundance of fresh water. The only running stream is Powderhorn creek, which is too small and slow to be used for power. The climate resembles that of southern Manitoba. Wood for fuel is plentiful. No stone-quarries nor minerals were noticed. Moose are very plentiful.—C. B. Allison, D.L.S., 1913.

(Ranges 11 and 12.)—These townships may be easily reached by sleighs in winter, but they would be very difficult to reach in summer because of the muskegs. The soil is clay loam suitable for mixed farming or grazing. The surface is wooded with poplar, spruce, tamarack and birch of small diameter which, however, may be used for fuel or building purposes. Hay is plentiful in the numerous sloughs. The water in the muskegs and also in the lakes in sections 9 and 14 is fresh and good. There are no water-powers. The climate resembles that of southern Manitoba. Wood for fuel is plentiful. No stone-quarries nor minerals were found. Moose and partridges are very plentiful.—C. B. Allison, D.L.S., 1913.

(North outline, ranges 11, 12 and 13.)—The country throughout these ranges is very wet and covered with small spruce and tamarack. For information as to climate and game, see the report on township 60, range 14—O. Rolfson, D.L.S., 1913.

This township is reached by the Hudson Bay railway which passes through sections 30, 29, 33, 34 and 35. Kiski siding will be located in section 1 of the township to the north. The soil is usually a peat or muck. There are, however, considerable areas of sand and clay in sections 18, 19, 29 and 30. The soil is not generally suited for agriculture although some parts of the above-named sections might be used. The surface is level or undulating, and is covered with small spruce, tamarack and jackpine. There are extensive swamps and bogs in sections 1, 12, 13, 34, 35 and 36, and most of the township is more or less swampy. There is no timber of value. No hay was seen. The water is usually fresh and of good quality, and the supply is abundant and permanent. There are no water-powers nor sites for power-dams in this township. The climate appears similar to that of other parts of Manitoba in the same latitude. A slight frost occurred on August 20th. Wood, which is everywhere available, is the only fuel in this township. Granite can be quarried in sections 20, 21, 23, 28, 29, 34, 35, and 36. There are no minerals of economic value. Moose and caribou are occasionally seen, and partridges, ducks and rabbits are fairly plentiful. Numerous traces of foxes muskrats, minks and otters were observed.—P. E. Palmer, D.L.S., 1914.

(Partial.)—This township is reached by the Hudson Bay railway which crosses sections 1 and 2. Kiski siding is situated in section 1. The soil is composed usually of peat or muck and is not at present suitable for agriculture. The surface is slightly rolling and consists of swamps and small ridges covered with a light growth of spruce and tamarack much of which has been burned. There are numerous granite ridges in sections 1 and 12. No timber of value was noted and there is no hay. The water in the swamps is fresh and of good quality, and the supply is abundant and permanent. Mitishto river which crosses the northwest corner of section 11 is about sixty-five feet in width and from two to eight feet in depth, and has a very

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slight current. The water is turbid but nevertheless fresh and of good quality. The banks are usually of clay and from twenty to thirty feet in height. In section 14 there is a fall of about twenty feet; the volume of water, however, is not sufficient to generate enough power to be of any value. The climate is similar to that of other parts of Manitoba in the same latitude. Wood which is the only fuel available can be obtained everywhere. Stone, consisting mostly of granite, could be quarried in large quantities in sections 1 and 12. There are no minerals of economic value. Game is not abundant. Signs of moose and caribou were observed, and there are also a few foxes, minks and grouse. Rabbits are fairly numerous.—P. E. Palmer, D.L.S., 1914.

(*North outline, ranges 11 and 12.*)—The eastern portion of range 11 is a **68.** succession of rock ridges covered with jackpine and spruce in the low places.

In the western portion the rock ridges disappear, giving place to a tamarack swamp, the surface of which is only gently undulating. This tamarack swamp continues throughout range 12. The uniformity of the surface of the swamp is broken here and there by islands of dense spruce. Frequent areas of open swamp occur. This area would be practically impassable in summer. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

## RANGE 12.

This township may be easily reached in winter by sleighs, but in summer it **33.** would be very difficult to reach it because of the numerous muskegs. The soil is mostly clay loam and is suitable for mixed farming or grazing. The surface is wooded with spruce, poplar, tamarack and pine which could be used either for fuel or for building purposes. Hay is plentiful in the numerous sloughs. The water in the muskegs is fresh. There are no waterfalls. The climate resembles that of southern Manitoba. No stone-quarries nor minerals were found. Moose and partridges are plentiful.—C. B. Allison, D.L.S., 1913.

**34.** (See the report on tp. 34-11-Pr.)—C. B. Allison, D.L.S., 1913.

This township is reached by the Hudson Bay railway which crosses sections **65.** 7, 18, 17, 16, 15, 22, 23, 24 and 25. Ponton siding is in section 23. The soil is usually composed of from six to thirty inches of peat or muck overlying a clay subsoil. There are some ridges of sand and clay in the eastern half of the township. Very little of the land in this township is at present suitable for agriculture. The surface is for the most part a slightly rolling muskeg or swamp covered with a light growth of spruce or tamarack up to eight inches in diameter. There are many small peaty ridges covered with thick spruce, tamarack and birch, usually of small size, but occasionally reaching to ten inches in diameter. The sandy ridges mentioned above are covered with spruce and jackpine up to twelve inches in diameter. The only timber of commercial value is in section 7 where about 2000 ties could be made. The Mitishto river crosses sections 34 and 35 of this township in an easterly direction. This river flows in a sinuous course through a valley from thirty to forty feet in depth. It averages about sixty feet in width, and in this township is from eight to twelve feet in depth, but the water has the appearance of being backed up by a beaver dam, the current being hardly perceptible. The banks are of clay. The water, though muddy is of good quality. This river was used as a canoe route for bringing in supplies for the Hudson Bay railway. There is no hay. The water in the swamps and creeks is usually fresh and good, and the supply is abundant and permanent. No land is liable to flooding. There are no water-powers nor were any suitable sites for dams observed in this township. The climate appears to be similar to that of other parts of Manitoba in the same latitude. A slight frost occurred about August 20th. Wood which is plentiful everywhere is the only fuel available in this township. There are no stone-quarries nor minerals of economic value. The erratic movements of the magnetic needle would indicate the presence of iron ore but no other traces of such were observed. Game is rather scarce. Moose, caribou and bears are occasionally seen. Foxes, minks and rabbits are plentiful and traces of lynxes and beavers were seen. Jackfish can be caught in Mitishto river.—P. E. Palmer, D.L.S., 1914.

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## RANGE 13.

This township may be reached from either Ochre River or Winnipegosis on the  
**33.** Canadian Northern railway. From Ochre River there are stage connections  
as far as East Bay, township 25, range 16. From here a good wagon road is  
opened up to Crane river in township 29, range 13, a distance of thirty-two miles.  
From here it is about twenty miles to the south boundary of township 33, range 13,  
which is across lake Manitoba. A bay, deep enough for a large boat, extends to the  
boundary. From Winnipegosis it is necessary to cross lake Winnipegosis, thence  
through the West Waterhen river to Waterhen lake, a distance of about twenty miles  
in a northerly direction, and thence southwards down Waterhen river a distance of  
eighteen miles to lake Manitoba. From the mouth of Waterhen river it is about thirty-  
six miles by water to the south boundary of township 33, range 13. The central  
sections of this township are broken up by Mire lake and Proulx lake the latter of  
which is five miles long. The remainder of the township is gently undulating. Fresh  
water may be found in the lakes in the western half of the township and also in any  
of the sloughs. There are numerous muskegs covered with long grass and rushes;  
some are filled with water to a depth of three or four feet. The soil, for the most part,  
is clay loam and is suitable for agriculture. There are a few outcrops of rock but no  
trace of minerals. Most of the surface is covered with scrub, consisting of poplar,  
willow, a few white birch, some spruce and tamarack, and a little jackpine. There is  
sufficient timber to supply fuel for settlers. Hay is found in large marshes and along  
deep bogs, the growth being very heavy. Game is plentiful and consists of moose, elks,  
and caribou. Rabbits, ducks, geese, partridges and prairie-chickens are plentiful. The  
lakes abound with fish. The climate is a fair average for this part of the Dominion.—  
*A. Fawcett D.L.S., 1912.*

It would be very difficult to reach this township in summer because of the  
**34.** muskegs. In winter, however, sleighs may be used, as a good road has been  
cut by the surveyor. The soil is mostly stony clay loam and is suitable for  
farming purposes. The surface is covered with scrub timber consisting of pine, spruce,  
tamarack and poplar. Hay is plentiful in the numerous sloughs. The water in the  
muskegs is fresh as is also that in Mire lake and a small lake in section 5. There are  
no waterfalls. The climate resembles that of southern Manitoba. Wood for fuel is  
plentiful in every part of the township. No stone-quarries nor minerals were found.  
Moose, elks, caribou and jumping deer are very plentiful.—*C. B. Allison, D.L.S., 1913.*

(Sections 27 and 34.)—The land throughout these sections is either very stony  
**48.** or swampy. The surface of the high land is covered with jackpine, and on the  
small areas where the soil is suitable for gardens there is a growth of poplar  
and birch. The Provincial Government have spent considerable money in draining  
the extensive muskeg to the west of these sections so that now a large part of it is  
quite dry.—*W. J. Deans, D.L.S., 1914.*

This township is reached by the Hudson Bay railway which runs through sec-  
**64.** tions 31, 32 and 33. The surface is a nearly level swamp covered with a  
sparse growth of spruce and tamarack and broken with occasional ridges  
rising to about six or eight feet above the general level of the country, and covered as a  
rule with spruce and tamarack up to twelve inches in diameter. The largest of these  
ridges occurs in section 33. A large floating bog which in parts is almost impassable  
is found in sections 19, 20, 21, 28, 29, 30 and 32. The soil is peat or muck from six  
to sixty inches in depth overlying a clay subsoil. At present there is no agricultural  
land in this township, but drainage would render a considerable portion suitable for  
mixed farming. There is no timber and no hay. The water in the swamps is fresh  
and of good quality, and the supply is abundant and apparently permanent. There  
are no water-powers, stone-quarries nor minerals of economic value. Wood which is  
abundant everywhere is the only fuel available. The climate appears similar to that  
of other parts of Manitoba in the same latitude. Frosts were noticed in July and  
August. There is but little game in this locality. Traces of moose were seen and  
there are some foxes, lynxes and a few minks. A few partridges, ducks and rabbits  
are also found.—*P. E. Palmer, D.L.S., 1914.*

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This township is reached by the Hudson Bay railway which runs through

- 65.** sections 4, 3, 2, 11 and 12. Sekip siding lies in section 12. The soil of the township is usually peat or muck overlying clay except near the Mitishto river and the two small creeks in sections 8 and 12 where there are belts of dry land which might be cultivated at the present time. The soil is, however, not generally suitable for agriculture until it has been drained. Drainage would not be difficult as Mitishto river is much lower than the general level of the country. The surface is for the most part an undulating swamp or muskeg which is broken by many hillocks covered with thick spruce, tamarack and birch. The swamps and muskegs are covered with a thick growth of tamarack and spruce. The banks of the Mitishto river are covered thickly with spruce, jackpine, tamarack, birch and poplar up to about eight inches in diameter and on the occasional flats along the river there are clumps of spruce timber up to thirty-six inches in diameter which would be suitable for lumber. Many ties were cut along this river during the winter of 1913-14. There are still about 1000 ties in section 12. There is no hay. No water-power can be developed. There are no stone-quarries nor minerals of economic value. The water is fresh and of good quality, and the supply is both abundant and permanent. Mitishto river winds across sections 2, 3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 23 through a valley from thirty to fifty feet in depth. It averages about sixty feet in width and the depth is from one to five feet but at high water it varies from six to twelve feet deep. The current is slight, and the water somewhat muddy though fit for use. There are several small flats of excellent land along this river which would be highly suitable for gardening or other cultivation. Wood which is abundant everywhere is the only fuel available. The climate appears to be similar to that of other parts of Manitoba in the same latitude. Slight frosts occurred in July and August. Game is not at all plentiful. A few traces of moose were observed. Signs of beavers were noticed along Mitishto river, and there are a few foxes, minks and lynxes. Partridges and ducks were also seen.

—P. E. Palmer, D.L.S., 1914.

(*North outline.*)—The country in this range is much better than in the range

- 68.** to the east, the eastern half being covered with large spruce, poplar and birch. The soil is a good clay loam suitable for agriculture. The west half of the range is broken by a succession of rocky ridges covered with jackpine, while the intervening hollows are covered with very dense spruce. South of the base line a lake one-half mile wide and one and a half miles long is found. This lake drains into the Grass river which traverses the range from west to east at a distance of about three miles south of the base line. For information as to climate, game, water-powers and minerals, see the report on tp. 68-14-Pr.—G. H. Herriot, D.L.S., 1913.

## RANGE 14.

This township is situated at the north end of lake Manitoba, a part of section

- 33.** 6 being covered by this lake. It can easily be reached by boats of light draught from Gypsumville, Westbourne or any other port on lake Manitoba, or from Winnipegosis, a town on a branch of the Canadian Northern railway, by way of lake Winnipegosis, the Waterhen river and lake Manitoba. There are at present no trails connecting this township with any settlement or town. The surface is mostly large marshes and muskegs, broken by low ridges of black loam and clay suitable for mixed farming and grain-growing. These ridges are covered with a growth of small poplar and willow. In the smaller marshes and along the edges of the muskegs and large marshes, a great quantity of hay can be cut. These advantages make this township especially suitable for stock-raising. However, a thorough system of drainage would have to be inaugurated before much of this township could be settled, as there is seldom enough arable land on a quarter-section to induce settlement. Moreover, the wet condition of the country would render the work of building and maintaining roads extremely difficult. There is no timber of commercial importance in this township. In most sections, however, building timber and fence posts in large enough quantities to supply the wants of settlers are available. Water is abundant and usually free from alkali or other salts. Wood, which is abundant in every part of the township, is the only fuel at present available, unless use could be made of the large deposits of peat in the muskegs. The climate appears to be similar to that of other parts of northern Manitoba; no summer frosts were noticed. There are no water-powers, and no coal or lignite veins, stone-quarries nor minerals of economic value were seen. Game is

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plentiful. Moose, caribou, elk, deer, bears, partridges, prairie-chickens, ducks and geese, as well as wolves, wild-cats, minks and muskrats, are plentiful. During the summer months there is an abundance of wild strawberries, etc.—*P. E. Palmer, D.L.S., 1912.*

This township is situated about six miles north of lake Manitoba in northern Manitoba, and about five miles east of the Waterhen river. There are no trails leading to this township. It can be best reached by sailing from Winnipegosis, a town on a branch of the Canadian Northern railway, on the shore of lake Winnipegosis, to the Waterhen river near where it emerges from Waterhen lake, and thence across country eastward. Horses can be taken across, but the country is soft, rendering it a difficult task to find a good road. Much of the surface is muskeg, but there are some large ridges of excellent clay subsoil with a surface soil of heavy black loam. In some places these ridges are stony, but apart from that the soil is of an excellent quality. The ridges are covered with a thick growth of small poplar and willows, while in the muskegs are occasional bluffs of tamarack which would be useful for building and fencing purposes. There is no timber of commercial importance. Hay is abundant throughout, and rich pea-vine and grass grow upon the ridges, making excellent grazing for stock. In its present condition this township is suitable for stock-raising and mixed farming to a limited extent, but like other parts of this section of Manitoba a thorough system of drainage is needed before it can support any large settlement. The climate is generally similar to that of other parts of northern Manitoba. No summer frosts were noticed. Water is abundant and good throughout the township, although there are no streams nor water-powers. Wood, which is plentiful, is the only fuel available, unless use could be made of the large deposits of peat in the muskegs. No lignite, coal veins, stone-quarries nor minerals of economic value were found. Game is most plentiful. Moose, caribou, elk, deer, bears, prairie and timber wolves are plentiful, as well as partridges and prairie-chickens. Of the fur-bearing animals signs of muskrats, minks and wild-cats were noticed.—*P. E. Palmer, D.L.S., 1912.*

(*North outline, ranges 14 to 23.*)—About the centre of range 14 the line runs through spruce and jackpine. A rock outcrop occurs here. West of this the country is drier, the rock is limestone and the timber consists of spruce, birch, poplar and jackpine. Around the shores of Cormorant lake there is considerable limestone which appears to be of good quality. The soil is clay and clay loam. In the first two miles west of this lake the line runs over a limestone hill covered with jackpine and spruce. A settler at the Narrows of Cormorant lake has grown good potatoes, and some of the resident engineers along the line of the Hudson Bay railway have small gardens and grow the ordinary vegetables. Partridges, prairie-chickens, ptarmigans, rabbits, muskrats, minks, caribou, moose and bears are plentiful. Large numbers of whitefish and jackfish, and also some pickerel and goldeyes, are found in all the lakes.—*O. Rolfson, D.L.S., 1913.*

(*North outline, ranges 14 and 15.*)—This line is crossed by the Mitishto river several times in the east half of range 14. The river enters range 15 about five miles south of the line and flows in a general northeasterly direction through ranges 15 and 14. The soil is clay loam and is covered with good spruce on both sides of the river. For information as to climate and game, see the report on tp. 60-14-Pr.—*O. Rolfson, D.L.S., 1913.*

The Hudson Bay railway enters this township in section 19 and leaves in section 36. The siding at Mile 93 is crossed by the east boundary of section 27. A good sleigh trail enters in section 30 and leaves in section 36. Between the trail and the north boundary of the township the Mitishto river flows almost due east. This stream varies from a few inches to five feet in depth, averages about sixty feet in width, and has a current of about one and one-half miles per hour. In the eastern part of the township the river valley is about thirty feet deep but towards the west it disappears almost entirely. The surface is generally level, and is covered with scrub spruce, tamarack and willow. Below the thick layer of moss which varies up to two feet in thickness there is a first-class soil consisting of clay loam. In the vicinity of the railway where the country has been drained the soil is much drier, showing distinctly the improvement by such work. A large floating bog occupies sections 13 and 24, and in sections 8 and 9 there is another which extends

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into the sections to the north. A few spruce suitable for building logs are found along the banks of the Mitishto river but elsewhere the timber is small, seldom exceeding six inches in diameter. No hay can be cut. Water can be found at almost any place but it usually has a distinct muskeg taste. The water of Mitishto river is very good. No land is liable to flooding. There are no water-powers. Summer frosts occur, but nevertheless the climate is well suited to mixed farming. Wood for fuel is fairly plentiful but no coal nor lignite were noted. No minerals were discovered. No game with the exception of a few partridges was seen.—J. S. Galletly, D.L.S., 1914.

- (*North outline, ranges 14, 15 and 16.*)—The country in these ranges is unsuitable for agriculture. In section 36 of range 14 the base line crosses Grass river which flows in a southeasterly direction. About five miles north of the base line there is an abrupt change in direction, the river coming from the southwest. The banks along this stretch rise to about 100 feet above the water-level at a distance of approximately half a mile from the river. The country is broken by a series of rocky ridges which lie mostly north and south. Two very fine lakes break the surface of townships 67 and 68 in this range. The base line crosses the Grass river again in section 36 of range 15. The rocky ridges still continue throughout this range except that they are farther apart and have more gradual slopes. At about one mile up the river from this last crossing an Indian village is located. Seven or eight families from Nelson House make their winter quarters here and spend the long months hunting or fishing in this district. The western part of the range is broken by Osborne lake to the north of the line and Wekusko lake to the south. Throughout range 16 the same rocky, broken country is encountered and much the same timber is found. In sections 32 and 31 a large lake is crossed. Wekusko lake lies some miles to the south of the base line. It is a broad expanse of water roughly twelve or fifteen miles north and south and five or six miles east and west, with a bold, rocky shore line, broken by many deep bays. Some very dense spruce from five to twelve inches in diameter is found bordering the lakes and rivers. Commercial fishing may become an important industry in this district when these lakes are made accessible by the construction of the Hudson Bay railway. The lakes, comprising Setting, Sipiwesk, Landing, Wintering, Cross, Paint, Wekusko and Halfway, together with the Nelson and Grass rivers, teem with fine whitefish, jackfish and some lake trout. Sipiwesk lake and the Nelson river have long been famous as a home for sturgeon. The climate is suitable for the growing of both vegetables and grain. Although the season of growth may be shorter than farther south, the longer hours of daylight more than compensate for this short season. Experience has shown that most garden vegetables can be grown, as evidenced by the gardens at the two company posts of Nelson House and Cross Lake. The Nelson House post is situated north of the district traversed by the 18th and 19th base lines while Cross Lake is south of it. Wheat, oats and barley have been successfully grown, on a small scale, at Cross Lake post. It is the hope of those who are interested in the development of the north, that minerals of economic value will be found. There is considerable to encourage that hope, for this district is crossed by several belts of Huronian rocks. The most important of these are the belts covering the north end of Wekusko lake and the whole of Wintering lake. Prospectors have been busily engaged around Wintering lake so that now nearly all the land fronting on the lake has been staked as mineral claims. The chief indication is of copper with its allied minerals. Development alone can determine whether or not these claims will prove of any commercial value. Water-powers in the immediate vicinity of the line surveyed during the season are to be found on practically all the streams and rivers. Of the fur-bearing animals, minks, foxes (red, black, silver and cross), lynxes, wolves, weasels, muskrats and beavers are to be found in great numbers. The winter of 1913 and 1914 has been an especially good one for foxes of all shades and colours. Red foxes were taken in great numbers and nearly every trapper had taken at least one or more silver foxes and not a few cross foxes. Black bears, otters and martens, although not plentiful, are to be found in this district. Moose and the woodland caribou are quite common, although not nearly so numerous as in some other parts of the country. Some jumping deer were seen in the valley of the Grass river. Game birds, such as geese and ducks, are to be found, but not in great numbers. Several varieties of grouse are very numerous.—G. H. Herriot, D.L.S., 1913.

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## RANGE 15.

(*East outlines.*)—Portions of these townships offer a few splendid locations for settlers. The Waterhen river seems to drain this range fairly well and offers an excellent means of drainage for the parts still wet. The wild grasses in this locality were of nutritious quality and the soil generally placed this range in a class by itself from an agricultural standpoint. East of the easterly limits of this range floating bogs occupy large areas and for the more southerly of these it is doubtful if there are drainage facilities to lake Manitoba. For information as to minerals, game and climate see the report of township 36, ranges 6 to 10.—*T. H. Plunkett, D.L.S., 1912.*

This township may be reached by boat from Winnipegosis, a town on a branch of the Canadian Northern railway. The southeast corner of the township is easily accessible by boat from any of the ports on lake Manitoba. The surface is mostly low and marshy, there being large muskegs divided by low ridges of poplar and willow. The soil of these ridges on the east side of the Waterhen river is generally a rich black loam with a clay subsoil, while on the west side heavy fires have burnt most of the humus from the soil leaving a sandy clay. Along the east bank of the river is a stretch of beautiful park-like country extending back from the river for one-half or three-quarters of a mile; here there are large quantities of hay and rich pasturage of grass and pea-vine. However, feed is plentiful all over this township, and hay may be had in any part except where the marshes are too soft to permit its being harvested. This township is suitable for mixed farming and stock-raising, and with drainage, can be developed into an excellent tract of farming land. There is very little good timber, the best being on the long narrow island in the Waterhen river in the northwest quarter of section 8 where there is some good spruce and poplar up to sixteen inches in diameter. However, wood for building, fencing and fuel is everywhere available. Water is abundant and is always fresh and good. The Waterhen river flows in a southerly direction through the westerly half of the township. This river has a current varying from one to four miles per hour and there are several rapids, but none of sufficient fall to be available for power. The width varies from five to twenty-five chains throughout the township and the depth is usually about ten feet, but in some of the rapids it is as shallow as four or five feet. Navigation is possible for boats drawing not more than four feet of water, but it is dangerous on account of rocks and shallows. From general indications the climate is similar to that of the other parts of northern Manitoba. No summer frosts were noticed. Wood is the only fuel available. No coal, lignite veins, stone-quarries nor minerals of economic value were noticed. Moose, elk and deer are plentiful as well as partridges, prairie-chickens and ducks of various kinds. Whitefish, pickerel and jackfish are caught in the Waterhen river and in lake Manitoba. Muskrats, coyotes and bears are trapped to some extent, but are not plentiful.—*P. E. Palmer, D.L.S., 1912.*

This township is best reached by boat from Winnipegosis, a town situated on a branch of the Canadian Northern railway on the shore of lake Winnipegosis. There is a winter trail to this township, but as it follows for the most part the Waterhen river it is not used until the river has frozen over. The surface is low and marshy—large muskegs divided by low ridges of small poplar and willow. The soil on these ridges is for the most part a rich black loam with a clay subsoil, and is often stony. The soil of the marshes and muskegs is usually a fibrous peat. This township is suitable to a limited extent for mixed farming and stock-raising, but most of it would need draining before it could be cultivated. The best land is along the east shore of the Waterhen river and on Hay island where there is a large amount of excellent hay as well as pea-vine and rich grass for pasturage. Considerable hay is now put up here by the Indians of the Waterhen River Indian reserve, which is situated on the west side of this township. There is no timber of commercial value in the township, but building and fencing material can be obtained on any quarter-section, the best being on sections 3, 9 and 10. Water is abundant and of good quality. Waterhen river flows through the western portion in a southerly direction. It varies in width from six to thirty chains, and in this township cannot be forded. The current varies from one-half to two miles per hour, but no water-power could be developed as the banks are low and flat. From general indications the climate is similar to that of the other sections of northern Manitoba. No summer frosts were noticed. Wood is

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the only fuel available, and it is everywhere obtainable. No veins of coal or lignite, stone-quarries nor minerals of economic value were found. Moose, elk and deer are quite plentiful, while partridges, prairie-chickens and ducks are very plentiful. Musk-rats and coyotes are the most common of the fur-bearers. Game is not so abundant here as it is south and east of this township, as the Indians hunt over this country a great deal.—*P. E. Palmer, D.L.S., 1912.*

The only means of reaching this locality is by the Hudson Bay railway which runs through the township to the north. The greater part of the township is occupied by Woody lake. The soil is of fourth-class quality and at present can be used only for the production of timber. The surface is covered with spruce, tamarack, jackpine and poplar. The timber is usually small, but along the shores of Woody lake there are a few trees large enough for building purposes. No hay can be cut. The water of Woody lake is fresh and of good quality, but that of the swamps has a bad taste. No water-power can be developed. Summer frosts occur but, nevertheless, the climate is well suited to farming. Wood for fuel can be obtained but no coal nor lignite were seen. Limestone is plentiful all along the shore of Woody lake but no other stone was found. No minerals of economic value were discovered. No game was seen. Whitefish, jackfish and pickerel are found in the lake.—*J. S. Galletly, D.L.S., 1914.*

This township is most readily reached by the Hudson Bay railway, the siding at Mile 87 being in section 16. The surface is a series of limestone ridges covered with scrub jackpine and poplar alternating with spruce and tamarack swamps. The soil is fourth-class and is best suited to growing timber with which it is at present covered. Some spruce suitable for building logs was seen along Woody lake, but other than this the growth is scrubby. No hay can be cut. Mitishto river which flows in an easterly direction through the northern portion of the township is about three feet deep and has a very slow current. The bottom is muddy and in places is covered with grass. The water is fresh but the taste is not always of the best. Woody lake, which is about twelve miles long and six miles wide, occupies a large portion of the south half of this township. The shore is rocky in the western part of the township and also in the vicinity of the railway, but in sections 1 and 12 there is a fine sandy beach. The depth of the lake is more than thirty feet in places, and the water is fresh and of good quality. Another fresh-water lake is found in sections 30 and 31. The water is shallow and both the shore and bottom are quite soft. Mitishto river and the above-mentioned lakes form all the sources of fresh water. Water may be found elsewhere but it is in swamps and has a muskeg flavour. There are no water-powers, and no land is liable to flooding. Limestone is very plentiful, there being a considerable quantity along the railway. No other stone nor minerals of economic value were noted. The climate is well suited to mixed farming. Summer frosts are liable to occur. Wood for fuel is plentiful, but no coal nor lignite were found. Game is scarce. Traces of moose and bears were seen, and there are also a few partridges. Whitefish, jackfish and pickerel are found in Woody lake.—*J. S. Galletly, D.L.S., 1914.*

## RANGE 16.

There are no roads in this township, which however is easily accessible by water from Winnipegosis on the Canadian Northern railway. The soil consists of from two to twelve inches of black loam with a very stony clay sub-soil and is second and third-class. The surface is uniformly level and is so marshy that the greater part of the township is unfit for settlement; it is almost entirely timbered with scrub poplar, spruce, tamarack and willow, except that there is generally a wide belt of open marsh covered with reeds surrounding lake Winnipegosis and Little Waterhen river. There are hay meadows in sections 31 and 32, but in wet years it is not possible to cut the hay. Little Waterhen river has an average width of two hundred and fifty feet and flows through immense reed beds, amongst which many small branches flow out and in again to the main stream; it has an average depth of five feet and current of one and a half miles per hour. Owing to the currents which the Waterhen rivers cause in the bay of lake Winnipegosis in this township the ice wears thin and is unsafe for horse traffic, even in very severe winters. A rise of water in the south end of the lake, which occurs every time there is a prolonged north wind, floods all the marshes along the shores of the lake and Little Waterhen river, and will also flood the tamarack marshes in sections 1, 2, 11 and 12. There are no water-

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powers in this township and no indications of coal, minerals nor quarrying stone were seen. This township is a great breeding place for ducks and many kinds of water-fowl.—*R. W. Cautley, D.L.S., 1908.*

This township may be reached in summer by small boats by way of Little Waterhen river or West Waterhen river, and by sleighs in winter. The soil is clay loam, suitable for mixed farming. The surface is covered with small poplar, spruce, tamarack, birch and willow. Hay is plentiful along the rivers and in many sloughs in almost every part of the township. There is an abundant supply of fresh water, yet the only land liable to flooding is the marsh adjoining Little Waterhen and West Waterhen rivers and the muskegs, which, to all appearances, are always covered with water. There are no waterfalls. The climate resembles that of southern Manitoba with perhaps less wind and earlier autumn frosts. Wood fuel is plentiful. No stone-quarries nor minerals were noticed. Moose and jumping deer are numerous.—*C. B. Allison, D.L.S., 1912.*

This township may be reached by small boats by way of Waterhen lake in summer, or by sleighs in winter. The soil is clay loam, suitable for mixed farming. The surface is wooded with poplar, spruce, tamarack, birch and willow. There is no large timber. Hay may be cut in dry seasons in the meadows around any of the lakes in this township. There is plenty of fresh water, yet the only land liable to flooding is the low muskeg, which to all appearances is always covered with water. No waterfalls were seen. The climate resembles that of southern Manitoba with perhaps less wind and slightly earlier frosts in the fall. Wood fuel is plentiful. No stone-quarries nor minerals were noticed. Moose and jumping deer are plentiful.—*C. B. Allison, D.L.S., 1912.*

(*North outline.*)—This township borders on Waterhen lake to the east. The west shore of the lake crosses the outline in section 36. The surface is nearly level and is mostly swampy. A lake about one-quarter of a mile wide by one mile long is crossed by the north boundary of section 32. A large muskeg extends for a considerable distance north from this lake. Large muskegs and tamarack swamps are also crossed by the north boundaries of sections 34 and 35. In section 31 there is a strip of green spruce from two to eight inches in diameter. The remainder of the outline passes through small poplar, spruce and jackpine, with old brûlé. The soil is black loam from five to ten inches in depth on a clay subsoil. No coal, stone-quarries nor minerals of economic value were noted. Moose and jumping deer are said to be plentiful. A few partridge were also seen and ducks are plentiful in Waterhen lake.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This township may be reached in summer by small boats and in winter by sleighs by way of Waterhen lake. The soil is a clay or sandy loam, suitable for mixed farming. The surface is densely covered with pine, poplar, spruce and tamarack of small diameter. Hay could be cut in a few small sloughs along Waterhen lake. There is plenty of fresh water. The muskegs are always covered with water. No waterfalls were seen. The climate resembles that of southern Manitoba with perhaps less wind and earlier autumn frosts. Wood for fuel is plentiful. There are no stone-quarries nor minerals. Moose are very plentiful.—*C. B. Allison, D.L.S., 1912.*

(*North outline, ranges 16 to 25.*)—This line is reached by an old sleigh road leading easterly from Novra, a siding on the Canadian Northern railway, in township 41, range 26, to the Swan Lake Indian reserve. Supplies and equipment were placed in range 24 and survey work commenced at the quarter-post on the north boundary of section 36, township 40, range 25. In range 24, some very good farming land was crossed. This land is fairly heavily wooded in sections 31 and 32. Birch river, a stream 100 feet wide with well-defined banks and flowing north through the Swan Lake Indian reserve to Swan lake, was crossed in section 32. Section 33 and fractional section 34 are low-lying meadow land. The Indians on Swan Lake reserve report that previous to the summer of 1912 hay could be cut on all this land but, during the exceptionally wet season, they were unable to harvest hay excepting on land near Swan lake. In section 34 Swan lake was reached. This lake is very shallow and freezes almost to the bottom. Fishing is carried on by the Indians on Swan river, the mouth of which was crossed in section 31, range 23. No fishing appears to be done in the lake and only jackfish and pickerel are caught in the river, no whitefish being

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found here. Having crossed the lake we saw some excellent farming land in sections 31, 32, 33 and 34, range 22. This belt of good land extends along almost the entire easterly shore of Swan lake. This country is heavily wooded, the soil is of excellent quality and in section 32 the land lies fifty feet above Swan lake. In section 35, the land drops considerably and a large area of swampy country covered with deep moss and wooded for the most part with scrub, spruce and tamarack, extends far north and south of the base. The description of the base line through section 36, range 22, and sections 31, 32, 33 and 34, range 21, cannot be taken as a fair indication of the nature of the country in general. The line here approaches Pelican lake and running for some distance through country immediately south of the lake, passes through land heavily timbered with excellent spruce, poplar, birch and tamarack and presents some good locations for settlers. Large meadows, considerable portions of which could be cut, extend south from Pelican lake through sections 33 and 34, range 21. Creeks were crossed in sections 32 and 33, range 21, flowing north to Pelican lake, but the water in these was decidedly saline. The ranger reported that north and south of the base in range 21, the country from an agricultural standpoint is far inferior to that described in the field notes of the survey. North of the base, small spruce and tamarack are found, with an almost continuous scattering of small jackpine. Open grassy stretches were occasionally met with which from his description were likely floating bogs. South of the base, the country was more promising, large areas of spruce and poplar being found. In section 34, the west shore of Pelican lake was reached. This lake measures over five miles in width where the base line crosses. The country between Pelican lake in range 20 and lake Winnipegosis in range 18 is for the most part swampy but apparently not nearly as wet as the country along the Hudson Bay branch of the Canadian Northern railway. In range 19 the land becomes more rolling and poplar ridges were crossed in section 35. This country might be developed into fair agricultural land. Lying under the moss and muck is a sandy clay, carrying limestone boulders. This limestone lies within eight inches of the surface in section 36, township 40, range 19. The country is covered principally with spruce, tamarack and an occasional jackpine. Brûlé covers the surface in range 19. A considerable spruce forest once flourished in this range, but fire has completely destroyed it. With range 18, the country again becomes a swamp, wooded with scrub spruce and tamarack, until the usual narrow strip of high land bordering lake Winnipegosis is reached in section 32. With the exception of Birch island no more land was crossed on this base. The island lying in sections 35 and 36, range 18, and sections 31, 32 and 33, range 17, contains a small amount of good agricultural land. It is wooded with small poplar, birch, spruce and tamarack, and for some distance in the centre of the island the land becomes swampy. This, however, could be easily drained. Having crossed lake Winnipegosis, the base was carried to the northeast corner of section 36, range 16, east of lake Winnipegosis. The land along the base was very swampy, small lakes being numerous. High land is found south at a distance of about five miles, but north, the usual swamp characteristic of the country stretches far and wide. During the winter of 1912 and 1913 some intensely cold weather was experienced from the 4th of January to the 14th of February, the thermometer registering sixty degrees below zero. Seldom during this period did the temperature rise above twenty degrees below zero. With the exception of the cold spell the weather was very favourable for survey work. The snowfall was not heavy, there being at no time more than two feet of snow on the level. The autumn of 1912 was exceptionally fine, no very cold weather being experienced until late in December. By the 8th of April the snow had almost disappeared and spring opened at once. Winter fishing was carried on by Indians and white settlers in lake Winnipegosis during the entire winter. Whitefish, pickerel and jackfish are taken in large numbers. Fishing and trapping afford ample work in winter for settlers in this locality. Moose and deer are very plentiful. Rabbits and grouse are numerous and many ptarmigans were seen. Muskrats, minks, lynxes and otters are fairly plentiful. Timber wolves are rarely seen now, but brush wolves are still found on the lakes in winter. These animals are said to be slightly larger than the prairie wolves.—T. H. Plunkett, D.L.S., 1912.

(*North outline, ranges 16 to 25.*)—Throughout ranges 25 and 24 the survey

**44.** traversed a rolling country, fairly heavily wooded as we approached the shore of Dawson bay, which was reached in section 31, range 24. In the valleys the country is generally of a swampy nature, but with proper drainage it could no doubt be utilized for agriculture. The higher land is wooded with spruce, tamarack, poplar, birch and balsam. Generally speaking the timber is too small to be of value

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as lumber, but some trees close to the lake in range 24 measure twenty-four inches in diameter. The soil in range 24 consists of clay carrying limestone boulders, and outcrops of limestone are frequent all along the lake shore. The easterly shore of Dawson bay was reached in section 32, range 22, the base having crossed narrow points in sections 35 and 36, range 23, and section 31, range 22. These points form part of I.R. No. 65 B. Surrounding Dawson bay south of the base in ranges 24 and 23, there is a strip of land from one to two miles wide, wooded very heavily in places with spruce, tamarack, birch and poplar up to twenty-four inches in diameter. This when cleared would afford some excellent locations for settlers. From explorations through the whole country adjacent to the 11th and 12th base lines, it has been noted that, contiguous to the lakes, there is always to be found a belt of high land, which, when cleared, would make good farming land. Back from the lake a distance of from one to three miles the country remains either a mossy swamp or a floating mass of decaying vegetation. In ranges 22 and 21 the base crossed the point of land separating Dawson and Pelican bays; here again we find on either side of the point fairly high gently rolling land, well wooded with spruce, birch, poplar and tamarack, and adapted to agriculture, while the intermediate lands are mossy swamps, wooded with stunted spruce and tamarack. The only other land touched by the base line lies in the narrow point separating Pelican bay from the main Winnipegosis lake. This land lies in sections 33, 34, 35 and 36, range 20, and sections 31 and 32, range 19. Owing to the narrowness of this point, practically all of the country traversed by the base line, and north of it, is fit for agriculture, but south of the base, where the point is wider, muskeg is found as usual. For a description of the climate, game and minerals, see the report on township 40, ranges 16 to 25.—*T. H. Plunkett, D.L.S., 1912.*

*(Partial.)—This township can be reached only by the Hudson Bay railway which runs through the northern portion. The siding at Mile 80 is crossed by the east boundary of section 33. The soil is usually fourth-class, consisting mostly of peat underlying a layer of moss and sometimes clay overlying rock. The swampy land is generally covered with small spruce and tamarack while elsewhere there is scrub jack-pine and poplar. No hay can be cut. The Mitishto river which crosses sections 31 and 32 is about one chain wide and three feet deep, and has a very sluggish current. Woody lake which occupies a large part of the southeast corner of this township is fairly deep and has a rocky shore. There is a spring containing excellent water in the vicinity of the east boundary of section 29. Water may also be found in the swamps but it has a muskeg taste and is not good to drink. No water-power can be developed and no land is liable to flooding. The climate is well suited to mixed farming. Wood for fuel is fairly plentiful but no coal nor lignite were found. There is considerable limestone but it is too soft for building purposes. However, it might be used for the manufacture of lime. No minerals of economic value were found. Game is not very plentiful, and consists of moose, caribou, rabbits and partridges. Pike and whitefish are found in Woody lake.—J. S. Galletly, D.L.S., 1914.*

*(North outline, ranges 16, 17 and 18.)—Throughout these ranges the line runs through a vast spruce and tamarack swamp. For information as to climate and game see the report on tp. 60-14-Pr.—O. Rolfsen, D.L.S., 1913.*

*The Hudson Bay railway which crosses the southeast corner forms practically the only means of reaching this township. The surface consists generally of spruce and tamarack swamps with ridges of limestone covered with small jack-pine and poplar. The soil is fourth-class and in its present condition is best suited for timber production. The timber consists mainly of spruce, tamarack, jackpine and poplar up to about six inches in diameter. No hay can be cut. There are two small lakes, one in sections 4 and 5, and the other in sections 19 and 30. These lakes are both shallow and have muddy bottoms. Mitishto river flows in a northeasterly direction, entering the township in section 5 and leaving in section 24. This stream is about three feet deep and has a very slow current. The bottom is muddy and is covered with grass in places. The water in the two lakes mentioned and Mitishto river is fresh while that in the swamps has a very bad taste. No water-power can be developed, and no land is liable to flooding. Limestone is found throughout the township, but it is too soft for building purposes; it might, however, be used for making lime. No minerals of economic value were found. Summer frosts occur but, nevertheless, the climate is well adapted to mixed farming. Wood for fuel is plentiful, but no coal nor lignite were found. Game is very scarce, only a few partridges have been seen.—J. S. Galletly, D.L.S., 1914.*

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## RANGE 17.

*(East outline.)*—This outline passes through almost level country, most of which is low and swampy. The greater part of the east boundary of section 1 lies in a large marsh adjoining lake Winnipegosis. Hay might be cut on part of this marsh when the water is low in the lake. The hay land in this vicinity, however, is liable to be flooded at any time, owing to the fact that a strong north wind often raises the water in the south end of lake Winnipegosis as much as three feet, flooding a large part of the hay land in the immediate vicinity of the lake. On the east boundary of sections 12 and 13 a lake about three-quarters of a mile wide and one mile long was crossed. This lake is surrounded by a strip of muskeg and hay land about half a mile in width. A large muskeg is also crossed by the east boundary of section 36, while small hay meadows are quite numerous all along the outline. The dry land between these marshes is covered with poplar and spruce up to six inches in diameter. The soil is chiefly black loam from five to eight inches in depth on clay subsoil. In a few places, however, gravel occurs. No coal, stone-quarries, nor minerals of economic value were noted. Moose and jumping deer are plentiful. A few coyotes, rabbits and partridge also occur, and ducks are very plentiful.—*W. Christie, D.L.S., 1908.*

*(Subdivision.)*—There are no roads in this township which, however, is easily accessible by boat from Winnipegosis station on the Canadian Northern railway, which is distant about sixteen miles to the southwest. The soil is second-class, consisting of from four to twelve inches of black loam, inclined to be peaty, overlying a stony clay subsoil; most of the township is too marshy to be fit for settlement. The whole surface is very nearly level and almost entirely covered with poplar, birch and tamarack, from two to six inches in diameter, with heavy willow. There is generally a belt of hay marsh along the shores of lake Winnipegosis in this township, and there is a large hay marsh covering most of sections 1 and 12 on which a quantity of good, coarse hay could be cut. Most, if not all, of the interior marshes and lakes in this township are saline, and the marshes along the shore of lake Winnipegosis are liable to be flooded to a depth of perhaps two feet. There are no water-powers and no indications of coal, minerals nor quarrying stone in this township. Moose, jumping deer and bears are plentiful.—*R. W. Cautley, D.L.S., 1908.*

*(East outline.)*—The soil along the line consists of black loam, from five to eight inches in depth, on a clay subsoil. The surface is almost level. Numerous small hay meadows are crossed by the east boundaries of sections 12, 13 and the south half of 25. A muskeg about a mile long by half a mile wide is crossed by the east boundary of sections 25 and 36. The rest of the outline passes through poplar, spruce and tamarack up to six inches in diameter, with old brûlé in places. No coal, lignite, stone-quarries nor minerals of economic values were noted. Moose and jumping deer are plentiful. A few coyotes, rabbits and partridges were also seen.—*W. Christie, D.L.S., 1908.*

These townships may be reached by way of lake Winnipegosis. The **34 & 35.** soil is clay loam, suitable for mixed farming. The surface is thickly covered with poplar, spruce and tamarack of small diameter; there are a few large spruce scattered along the shore of lake Winnipegosis. Hay is plentiful in the many sloughs in every part of these townships. There is an abundant supply of fresh water, but only the marshes are flooded; heavy winds drive the waters of lake Winnipegosis over these. There are no waterfalls. The climate resembles that of southern Manitoba, with perhaps less wind and earlier autumn frosts. Wood for fuel is plentiful. There are no stone-quarries nor minerals. Moose and jumping deer are plentiful.—*C. B. Allison, D.L.S., 1912.*

*(East outline.)*—The country passed over by this outline is nearly level and is chiefly covered with poplar, spruce and tamarack up to six inches in diameter, with old brûlé. In section 12 spruce and poplar up to fourteen inches in diameter is found. A lake about half a mile wide by one and one-half miles long is crossed by the east boundary of section 13. The greater part of this lake lies in township 35, range 16. A large muskeg surrounds the lake. The soil is black loam, from five to ten inches in depth, on a clay subsoil. Very little hay land was seen

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along this line. No minerals of economic value nor stone-quarries were noted. Moose and jumping deer are found. A few partridges were also seen.—*W. Christie, D.L.S., 1908.*

(*North and east outlines.*)—The surface of this township so far as could be seen from these outlines is nearly level and contains several large muskegs.

**36.** A large muskeg occupies the greater part of section 1, another is crossed by the east boundary of section 13, and still another by the east boundary of section 36, while a fourth is crossed by the north boundary of section 34. The rest of the township is chiefly covered with small poplar, spruce, jackpine and tamarack, with old brûlé. A strip of spruce, some of which has attained a diameter of ten inches, occurs in section 34, east of the muskeg mentioned above. The soil is chiefly black loam, from five to ten inches in depth on a clay subsoil. An excellent harbour almost one-half mile wide by one mile long, known as McAuley's harbour, lies in section 33. The entrance to this harbour from lake Winnipegosis is in section 4, township 37, range 17. Point Brabant, on the east shore of lake Winnipegosis in this township consists of a cliff of limestone about twenty feet high. It is possible that stone might be quarried here. No coal nor minerals were noted. Moose and jumping deer are said to be plentiful. A few partridges and ducks were the only game seen during the course of survey.—*W. Christie, D.L.S., 1908.*

(*Subdivision.*)—This township may be reached from lake Winnipegosis. The soil is clay loam, suitable for mixed farming. With a few exceptions the surface is wooded with poplar, spruce, birch and tamarack of small diameter. These exceptions, consisting of the west halves of sections 9 and 16, sections 8 and 17 and part of the south half of section 3, have considerable spruce and poplar of an average diameter of about twelve inches. Hay may be cut in the sloughs in any part of the township. There is plenty of fresh water but no land, except the muskegs, is liable to be flooded. The muskegs appear to be always wet. There are no waterfalls. The climate resembles that of southern Manitoba with perhaps less wind and earlier autumn frosts. Wood for fuel is plentiful. Limestone and sandstone of excellent quality are plentiful in sections 8 and 17 along lake Winnipegosis. They may be seen plainly from lake Winnipegosis, as the rocky cliff is about fifty feet in height and is composed of layers of different shades of colour. In section 16, a mound was attempted at the quarter-post but bed rock was found at a depth of about three inches. No doubt the bed of stone also extends across section 16. No other minerals were noticed. Moose are plentiful.—*C. B. Allison, D.L.S., 1912.*

## RANGE 18.

These townships form part of the long promontory known as 'Red Deer point,' on lake Winnipegosis. There are a few local logging and hay trails but no through road in these townships, which, however, are easily accessible by boat from Winnipegosis station, on the Canadian Northern railway, which is about ten miles southerly from the north boundary of township 32. The soil consists of black loam from four to eight inches deep with a gravelly subsoil, and is second-class. The surface is almost uniformly level, being only a few feet above the level of lake Winnipegosis, and is for the most part covered with timber, although there are large tracts of open hay meadow and marsh. The timber consists principally of poplar and birch, from four to eight inches in diameter, but there are thick spruce woods in sections 4, 5, 10, 20 and 21 of township 33, and part of section 31 in township 32, which, although most of the valuable timber has been cut by lumbermen, it will again be valuable in twenty or thirty years time; it is also worthy of note that most of township 33, is well seeded with young spruce, growing through the poplar and birch woods, which gives this land a prospective value as a timber reserve. There are considerable tracts of hay land throughout these townships; the hay is principally slough hay and grows in big alkaline marshes which frequently degenerate into reed beds wherever the surface happens to be a little lower than the average, so that water overlies the surface all the year round; there is a particularly large marsh of this kind running through the easterly half of sections 16, 21, 28 and 33 and the westerly half of section 34 in township 33, besides a number of smaller ones scattered throughout both townships, on which Icelandic and half-breed fishermen put up large quantities of hay during the summer months. The water of lake Winnipegosis, which is beautifully clear and wholesome, is available for all needs of settlers and stock

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throughout these townships, besides, there are a number of interior lakes, which, however, seem to be either saline or alkaline. There are no water-powers in these townships, and no evidence of the existence of coal, minerals or quarrying stone. There is an abundance of moose, elk, jumping deer and bear throughout all this region, which, moreover, cannot be excelled for wild-fowl shooting, and lake Winnipegosis abounds with fish. There is an unusually heavy rainfall in this district, due to the low-lying character of the land and the near presence of immense tracts of open water. There are several Icelanders squatting along the shores of township 33, but their real occupation is fishing, and the only farming they attempt is confined to planting a small patch of potatoes and putting up hay from the marshes.—R. W. Cautley, D.L.S., 1908.

This is a fractional township, covering part of the long promontory known  
**34.** as 'Red Deer point,' on lake Winnipegosis. There are no trails or roads leading into it and it is best reached by boat, or over the winter ice. The whole township is almost perfectly level and lies only a few feet above the present level of the lake. It is covered with timber except along the bank of the lake where there is generally a belt of marsh land, covered with coarse hay, which extends from five to ten chains back from the water. The soil is second-class and consists of loam from four to twelve inches deep, while the subsoil is generally either gravel or sand. The timber is chiefly poplar and birch from six to nine inches in diameter, but there is a great deal of spruce from six to twelve inches in diameter in sections 20, 29, 30, 31 and 32, which will always make those sections more valuable as a timber reserve than for any other purpose. Coarse hay grows in abundance in the marshes around the lake, but it is not of good quality and it would be difficult, perhaps impossible, to harvest it in a wet season. Lake Winnipegosis surrounds and penetrates this township to such an extent that its excellent water is available for all needs of settlers or stock. A wind from the north, blowing steadily for three or four days, will raise the waters of the lake several feet at this point, in which case the marshes referred to must be very generally flooded. There are no water-powers available in this township, and no evidence of the existence of coal, minerals nor quarrying stone. Moose, jumping deer and bears abound throughout all the district of which this township is a part. It is a wonderful country also for ducks, geese and fish. The only climatic feature of this district which is particularly noticeable is that owing to the low-lying character of the land which surrounds the immense water area comprising lakes Winnipeg, Manitoba and Winnipegosis, there is a great deal of fog and mist in the autumn and early winter and a somewhat unusually heavy rainfall in summer.—R. W. Cautley, D.L.S., 1908.

This is a fractional township, forming the end of the long promontory known  
**35.** as 'Red Deer point,' on lake Winnipegosis. There are no trails or roads in it, but it is easy of access by boat or over the winter ice from Winnipegosis, the terminus of a branch line of the Canadian Northern railway, which is about twenty-two miles in a southerly direction from the south boundary of the township. The whole township is very nearly level and lies only a few feet above the level of lake Winnipegosis; it is covered with timber, except along the bank of the lake where there is generally a belt of marsh land covered with coarse hay. The soil is second-class and consists of from four to twelve inches of black loam overlying a gravelly or sandy subsoil. There is a great deal of timber in this township, sections 4, 5, 8, 9, 16, 17, 20, 21 and 29 being fairly well covered with spruce, jackpine, tamarack, poplar, birch and balm of Gilead from six to twelve inches in diameter, while the rest of the township is covered for the most part with poplar and birch, having, however, scattered spruce all through it. A good deal of this township has already been granted as timber limits, and most of the milling timber removed, so that the present value of the timbered land within it, considered as a timber berth, is slight. Owing to the strong growth of valuable young timber which covers the greater part of this township, however, its accessibility from navigable water and the great protection from fire which its peculiar position gives it, it is recommended that the whole of this township be held as a timber reserve. This recommendation seems the more justified in view of the fact that while this township is undoubtedly capable of settlement, the character of the soil and heavy growth of timber which covers it make it less suitable for settlement than immense areas of still unsettled land within reasonable distance of transportation facilities which are available at the present time. Coarse hay grows on the

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marshes along the lake shore, but there are few and unimportant hay marshes in the interior of the township. The water of lake Winnipegosis is available for the use of settlers or stock from any point of this township, but there are no creeks or interior lakes within it. There are no water-powers available, and no evidence of the existence of coal or minerals was seen. At the northerly end of South Manitou island, there is a rock face twenty feet high, which might be valuable for quarrying purposes. There were no other signs of quarrying stone in this township. Moose, jumping deer and bears are plentiful. There are no settlers on the main land, but South Manitou island is used as a summer fishing station.—*R. W. Cautley, D.L.S., 1908.*

This township may be reached in summer by boat from Winnipegosis, and  
**40.** in winter by following the bush trail to Duck bay and thence by lake Winnipe-  
 gosis. There is a strip of dry, level land along lake Winnipegosis about one-quarter of a mile in width which is covered with poplar and birch from two to five inches in diameter. This is good land with a soil of black loam to a depth of about four inches and a clay or gravel subsoil. The remainder of the township is very wet and swampy with spruce and tamarack of an average diameter of about four inches. There is no hay. Lake Winnipegosis occupies about three-quarters of the township. It contains fresh water, and is navigable for large boats, but is quite shallow near the shore for a distance of about twenty-five to thirty chains. It has a gravelly bottom. The shore is gravelly clay and not very high. There is no other water in the township, except that of the muskegs. The land is not subject to flooding to any extent, other than what would be caused by a heavy rain. There are no water-powers. The climate is suitable for the growing of all kinds of grains and vegetables. There is not much danger of summer frosts. There is sufficient wood to supply the settlers with fuel for a considerable length of time. No stone suitable for building purposes nor indications of minerals were seen. Moose are quite plentiful and elks are occasionally seen. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are also quite plentiful. Whitefish, pickerel and jackfish are caught in large quantities in lake Winnipegosis.—*J. E. Jackson, D.L.S., 1913.*

In summer this township may be reached by boat from Winnipegosis, as the  
**41.** eastern two-thirds of the township is occupied by lake Winnipegosis. In winter a team may follow the bush road from Winnipegosis to Duck bay and thence by the lake to the 11th base line, along which we constructed a road across the southern boundary of this township. There is an area along the west boundary of the township, containing sections 31 and 32 and the western halves of sections 6, 7, 18, 19 and 30, which is almost entirely wet spruce and tamarack swamp. This area consists of moss to a depth of about eight inches and black loam beneath. The spruce and tamarack average about five inches in diameter. Most of the remainder of the township, west of lake Winnipegosis, is slightly rolling and covered with small spruce, tamarack, poplar, birch and jackpine of an average diameter of about five inches with here and there small areas of spruce and tamarack swamp. The soil is about two inches of black loam with a sandy gravel subsoil, and is fairly good land for farming. The islands in lake Winnipegosis are level, and are covered with spruce, birch and poplar of an average diameter of about eight inches. There is no hay in the township. The only water is that of lake Winnipegosis, which occupies about three-quarters of the township; this water is fresh and of good quality. The lake is shallow near the shore, but can be navigated with large boats about half a mile from the shore. The land is not subject to flooding to any extent. There are no water-powers. The climate as far as could be ascertained from fishermen living in the neighbourhood is suitable for the growing of all kinds of grains and vegetables. There is sufficient wood to supply the settlers with fuel for a considerable time. No stone, suitable for quarrying, nor indications of minerals were seen. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance. There is a plentiful supply of whitefish, pickerel and jackfish in lake Winnipegosis.—*J. E. Jackson, D.L.S., 1913.*

In summer the only means of reaching this township is by boat from Winnipe-  
**42.** gosis, situated at the south end of lake Winnipegosis. In winter the bush road may be followed north from Winnipegosis to Duck bay and thence by the lake to any portion of this township. All of this township except a small part in the southwest, is occupied by lake Winnipegosis. The soil is chiefly black loam to a depth of about six inches with a clay subsoil, and is fairly good land for farming. Sections

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17 and 18 are level and very wet, the southern portion being chiefly hay meadow and the northern part covered with willows. The remainder of the township is slightly rolling and covered with spruce, tamarack and poplar from four to ten inches in diameter with some willows. The only hay is in the hay meadow mentioned above in sections 17 and 18, but the surface is too wet to enable the settlers to cure the hay except in very small quantities. Lake Winnipegosis is a fresh-water lake of sufficient depth to allow vessels of considerable size to navigate except to within a distance of about one-half mile from the shore. There are no rivers and no other lakes. The climate is suitable for the growing of all kinds of grains and vegetables. No indications of summer frosts were noticed. There is sufficient timber to supply the settlers with fuel for a considerable time, but no signs of coal or other fuel were seen. No stone of sufficient size and extent to quarry nor signs of minerals were seen. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance. There is a plentiful supply of whitefish, pickerel and jackfish in lake Winnipegosis.—*J. E. Jackson, D.L.S., 1913.*

(*East outline.*)—This township can be reached by man-packing from the Hudson Bay railway which passes through the township to the north. It may

**61.** also be reached by steamboat from Pas, as the southwest portion of the township is occupied by Moose lake. The whole township seems to be similar to those usually found in the district, being composed mainly of spruce and tamarack swamps with ridges of jackpine and poplar. The soil is fourth-class, consisting usually of moss, and at present will grow only timber. In sections 1 and 12 there is some sandy soil on which there was a good growth of jackpine and spruce. The timber is usually small and consists of spruce, tamarack, jackpine and poplar, but in the sections mentioned above the spruce and jackpine are of fair size. Near the northeast corner of this township there are large swamps which would be almost impassable in summer. There is no hay. No land is liable to flooding, and no water-power could be developed. Water for drinking purposes can be obtained in the swamps but it is not of very good quality. Summer frosts occur, but they are not severe enough to injure crops. Wood for fuel is plentiful but no coal nor lignite were found. Other than the limestone, so common in this district, no stone was noticed. No minerals of economic value were found. Game was scarce, only one moose being seen. Jackfish, pickerel, trout and whitefish are especially plentiful in Moose lake.—*J. S. Galletly, D.L.S., 1914.*

The Hudson Bay railway enters this township in section 18 and leaves it

**62.** in section 36. Limestone lake, which is about five and a half miles long and half a mile wide, lies to the south of the railway. This lake is quite deep and contains good clear water. Two other lakes were found in the township, one in sections 5 and 6, and the other in sections 23 and 34. These lakes are shallow and have low, marshy shores and muddy bottoms. The soil in the township is usually moss, overlying a subsoil of muck. In the immediate vicinity of Limestone lake clay is found. As a whole the soil is best suited for the production of timber. The latter comprises spruce, tamarack, jackpine, poplar and birch, but which is of little commercial value, as the size varies from scrub to about twelve inches in diameter. No hay was seen. The lakes mentioned, as well as two or three creeks and the Mitishto river which are connected with Limestone lake, provide good water. The supply is abundant and permanent. Water can also be found in the swamps but it is always of an inferior quality, it having an odour resembling sulphuretted hydrogen. No land is liable to flooding, and no water power can be developed. Summer frosts occur but would not deter any farming operations from being undertaken. Wood for fuel is plentiful everywhere but no coal nor lignite were seen. Limestone occurs throughout the whole of the township, and was the only stone noticed. No minerals of economic value were found. Game is very scarce, only a few caribou being seen. Whitefish, jackfish, pickerel and trout are found in Limestone lake. This lake, however, has been well fished and at present is receiving a much-needed chance to be restocked.—*J. S. Galletly, D.L.S., 1914.*

## RANGE 19.

This township is, in general, sandy and stony and is covered with willows,

**33.** poplar and some dried and green spruce of about five or six inches in diameter. There are some fairly large bay marshes scattered throughout and a few good salt springs which have an outlet into lake Winnipegosis. The shores of this lake are very low and wet and are covered with long reeds to a considerable distance from the

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shore. In a few places, however, large stones and sand have formed an embankment which protects the land from flood in heavy wind storms.—*C. A. Bourget, D.L.S., 1900.*

Spruce island, Sugar island and Long island are much the same, being, in all cases, low marshy flats, only a few feet above the level of the lake, surrounded by a barrier of lake boulders and gravel, pushed up by the action of many ice packs; they are all timbered with small poplar, birch, balm of Gilead, elm, scrub oak, ash and maple, with a few fine spruce trees. Spruce island, as the name indicates, contains some good spruce timber, and Sugar island is so called because there are a number of maple trees on the island from which the Indians make sugar in the summer. On the mainland, the soil seems to be good, and thoroughly suitable for farming settlement. There is usually a belt of hay marsh between the lake and the edge of timbered country.—*R. W. Cautley, D.L.S., 1908.*

The settlement in this township consists of a few homesteaders along the shore of lake Winnipegosis. The surface is timbered and very stony in places. Large muskegs are found in the central portions. The settlers do moderately well at mixed farming.—*G. A. Bennett, D.L.S., 1912.*

The greater part of this township is occupied by lake Winnipegosis, the shores of which are generally covered with long reeds. There is quite a large meadow in section 18 where the two settlers from sections 6 and 7 procure their hay. These settlers have houses, barns, cattle and are cultivating some land. A few uninhabited houses with patches of cultivated land around them were seen along the shore of the lake. The land is generally sandy with some stones and gravel.—*C. A. Bourget, D.L.S., 1900.*

The shores of the lake, not only in this township, but throughout the whole district, are level and very low-lying, there generally being a strip of coarse hay marsh lying between the bank and the edge of the timbered land. Coleman island, the lower half of which lies in this township, is level and covered with poplar, birch, spruce, balsam, fir, elm, ash and scrub oak, except for a number of hay and reed marshes which occur along the shore. Elm up to thirty inches in diameter were found in sections 22 and 23, but much of the largest spruce has been cut off. The soil consists of from eight to fourteen inches of black loam, overlying a clay subsoil, and is suitable for mixed farming, but the island is so cut up by water, and at the same time contains so much good young timber, that the whole island should be reserved from settlement as a timber reserve. There are no water-powers on the island, and no indications of coal, minerals or quarrying stone were seen.—*R. W. Cautley, D.L.S., 1908.*

This is a fractional township, the greater part of which lies in Sagemace bay, lake Winnipegosis. A wagon trail from Winnipegosis, a station on the Canadian Northern railway, about thirty miles to the south, crosses the south boundary of section 5. The soil is second-class, consisting of from four to six inches of black loam overlying a gravel subsoil. That part of the township which lies on the mainland is suitable for farming. Coleman island, an irregularly shaped island, about four miles long, of which the northerly half lies in sections 1 and 12 of this township, has a level surface timbered with spruce, balsam, fir, poplar, birch, elm, oak, ash and maple. The soil is second-class, but the island should be reserved from settlement as a timber reserve. No evidence of the existence of coal, minerals or quarrying stone were seen. Moose, jumping deer and bears are very plentiful throughout the whole district. Both branches of South Duck river have banks from seven to fourteen feet high in places, where it would be possible to construct a dam so as to give a limited water-power, but this could not be done without flooding a large tract of land above the dam.—*R. W. Cautley, D.L.S., 1908.*

This township may be reached in summer by boat from Winnipegosis, situated at the south end of lake Winnipegosis. In winter the bush road may be followed from Winnipegosis to Duck bay and thence by the lake the remainder of the way. This township is composed of four of the Camping islands and a narrow strip of land on the west from twenty to eighty chains in width. The remainder of the township is occupied by lake Winnipegosis. The land is chiefly black soil to a depth of six inches with a gravel subsoil, and a large part of it is dry and suitable for farming. The soil of the islands is similar to that of the main land. The surface of the mainland is generally slightly rolling while that of the islands is fairly level. Sections

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6 and 7 are covered with spruce, poplar, balsam and birch of an average diameter of about fifteen inches. The remainder of the main land is chiefly covered with poplar and birch up to about six inches in diameter. The islands are covered with spruce, balsam and birch up to about twelve inches in diameter with willows and reeds in places. It would be advisable to reserve the timber for the future use of the settlers, as there is not a sufficient quantity of good timber to be set aside as a timber berth. There is no hay. Lake Winnipegosis contains fresh water and is navigable for fairly large boats to within twenty-four chains of the shore. There are no streams of importance. The land is not subject to flooding to any appreciable extent. No water-powers exist. The climate is suitable for the growing of the ordinary grains and vegetables. Summer frosts seldom occur. The timber is the only available fuel and there is sufficient to supply the settlers for a considerable time. There is very little stone and no indications of minerals were seen during the survey. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance. Whitefish, pickerel and jackfish are caught in large quantities in lake Winnipegosis.—J. E. Jackson, D.L.S., 1913.

This township may be reached in summer by boat from Winnipegosis, a station on the Canadian Northern railway near the south end of lake Winnipegosis.

**39.** In winter a bush road may be followed as far as Duck bay, and the lake from there to this township. Sections 5, 6 and 17 and the eastern halves of sections 6, 7 and 18 are slightly rolling and covered with poplar and birch up to about six inches in diameter. The soil consists of black loam to a depth of about six inches with a clay subsoil. This area is good farm land. The remainder of the township, west of lake Winnipegosis, is spruce and tamarack swamp, and is very wet. The timber is all quite small, nowhere exceeding about six inches in diameter. It would therefore be advisable to reserve it for the needs of future settlers. There is very little hay in the township. Lake Winnipegosis occupies a little over half of the township. It is a fresh-water lake and sufficiently deep about a quarter of a mile from shore for large vessels. There are also small inland fresh-water lakes in sections 19, 30, 31 and 32. A creek about ten feet wide and two feet deep flows through sections 18, 17 and 8, where it enters lake Winnipegosis. It apparently has very little current except in flood time. The land in this township is not subject to flooding. There are no water-powers. The climate is suitable for the growing of all kinds of grains and vegetables. There is not much danger of summer frosts. There is sufficient wood to supply the settlers with fuel for a considerable length of time. No stone-quarries nor indications of minerals were seen. Moose are quite plentiful and elks are occasionally seen. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are also quite plentiful. Whitefish, pickerel and jackfish are caught in large quantities in lake Winnipegosis.—J. E. Jackson, D.L.S., 1913.

In summer the only way of reaching this township is by boat from Winnipegosis

**40.** to the southeastern corner of the township. It is practically impossible to get into the remainder of the township except on foot, as it is nearly all swamp and very wet. In winter the bush road may be followed north from Winnipegosis to Duck bay, and thence by the lake as far as the northeast corner of section 21 of the township to the south. From this point a winter trail was cut across sections 28, 29 and 32 to the southeast corner of section 5 of this township and thence through sections 5, 6, 7, 18, 19, 20, 29, 32, 28, 27 and 26. This township is practically all swamp and is too wet to be of any use as farm land until it is drained. This would be difficult to do as it is nearly on the same level as lake Winnipegosis. The surface is covered with moss overlying black loam with a subsoil of clay. The timber consists of small spruce and tamarack from two to six inches in diameter. It is so small that it has very little commercial value and is not more than sufficient for the needs of future settlers. There is no hay, the ground being entirely covered with moss and willow scrub. Lake Winnipegosis occupies parts of sections 12, 1, 2 and 3, and contains fresh water. The water of Constance lake which occupies about half of section 35 is also fresh though of a slightly brownish colour from vegetable matter. There are also several small fresh-water lakes surrounded by tamarack swamps and containing from twenty to thirty acres in sections 18, 27 and 24. There is no other water in the township except that of the muskegs, but good clear water may be obtained anywhere by digging a well from five to eight feet deep. No water-powers exist. The climate, as far as could be ascertained from fishermen living in the neighbourhood, is suitable for the growing of all kinds of grains

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and vegetables. There is sufficient wood for fuel throughout the township to supply the settlers for a considerable time. No stone nor indications of minerals were seen. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance. Whitefish, pickerel and jackfish are plentiful in lake Winnipegosis.—*J. E. Jackson, D.L.S., 1913.*

**41.** There is no way of reaching this township in the summer, as the country between it and lake Winnipegosis is nearly all swamp and is very wet. In winter a team may follow the bush road from Winnipegosis to Duck bay, thence by the lake to the 11th base line. From here a road was cut in a westerly direction across township 40, range 18, as far as section 32, township 40, range 19, and thence northerly across sections 5, 8, 16, 28 and 32 of this township. This is essentially a winter trail, as it is almost entirely through tamarack swamp, and is not suitable for taking a team over before December when the swamps are well frozen. This township is practically all mossy swamp and is very wet. There is moss to a depth of from six to ten inches overlying a layer of black loam and clay. Until this township can be thoroughly drained it will not be of much value as farm land. The surface is nearly all covered with spruce and tamarack of an average diameter of about four inches. Very little of the township is entirely open, but in places the timber is somewhat scattered. There is not more timber than is required for the immediate needs of the settlers. No hay was seen. There are small fresh-water lakes, containing about eighty acres each, in sections 8, 20 and 31. There is no other water in the township, except that of the muskegs. The land is not liable to be flooded to any extent. No water-powers exist. The climate, as far as could be ascertained from fishermen living in the neighbourhood, is suitable for the growing of all kinds of grains and vegetables. There is sufficient wood for fuel everywhere to last the settlers for a considerable time. No stone nor indications of minerals were noticed. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance.—*J. E. Jackson, D.L.S., 1913.*

This township is most readily reached by the Hudson Bay railway which crosses the northwest corner. The surface consists of a series of ridges covered with scrub jackpine alternating with spruce and tamarack swamps of varying degrees of wetness. There is a certain amount of stony clay soil in the northern part of the township which might be rated as third-class but elsewhere the soil is fourth-class. The four-class land is best suited for growing timber while the stony clay land might be used for mixed farming. The timber is seldom found very large, and consists mainly of jackpine, spruce and tamarack. No hay can be cut. Water can be procured in all the swamps but it has a muskeg taste and is not always pleasant to drink. The water of Moose lake is of good quality. No water-power can be developed and no land is liable to flooding. Wood for fuel is plentiful but no coal nor lignite was seen. Limestone which is found in almost every section is too soft for building purposes but is probably suitable for the manufacture of lime. No minerals of economic value were noted. The game consists of caribou, moose, wolves, coyotes and foxes. Whitefish, jackfish, pickerel and trout are plentiful in Moose lake.—*J. S. Galletly, D.L.S., 1914.*

The Hudson Bay railway runs through this township, and a siding is located in section 13. The soil is usually fourth-class, and consists of moss overlying muck or clay. Occasionally near the railway and along the south boundary of the township the clay comes close to the surface; it has a large percentage of stone mixed with it and this renders it undesirable for farming. The soil in its present condition will grow nothing but timber with which it is covered. The timber is chiefly small spruce, tamarack, jackpine and poplar. Trees suitable for building logs can be cut in many sections, but the smaller sizes are more plentiful. There is no open country. No hay could be cut. Water may be obtained in two lakes in sections 14 and 23, and in the swamps. It has a distinctly swampy taste and is not good for drinking purposes. No water-power could be developed, and no land is liable to flooding. Summer frosts occur but they would not interfere with farming operations which might be carried on here. Wood is plentiful for fuel. No coal nor lignite was found and no stone suitable for building was seen, but there are several limestone ridges, in which the rock would probably be suitable for the manufacture of lime. No minerals of economic value were discovered. Game was very scarce, only a few caribou having been seen.—*G. S. Galletly, D.L.S., 1914.*

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(*North outline.*)—Owing to the presence of Reed lake the land in this range  
**64.** is somewhat drier than that to the east. The timber near the shore is spruce  
 from six to eighteen inches in diameter. The soil is clay loam overlying granite.  
 For information as to climate and game, see the report on tp. 60-14-Pr.—*O. Rolfsen,*  
*D.L.S., 1913.*

## RANGE 20.

The north outline of the township runs through a level country covered, for  
**34.** the most part, with small poplar and willow alternating with hay marshes or  
 willow flats. Pine river crosses the north boundary of section 35 in a north-  
 erly direction, and South Duck river crosses the north boundary of section 33, also  
 in a northerly direction. There are good hay meadows and marshes. The soil is  
 second-class, consisting of from four to six inches of loam overlying a gravelly clay  
 subsoil. The township would seem to be most suitable for farming. No evidence of  
 the existence of coal, minerals or quarrying stone was seen. Both branches of South  
 Duck river have banks from seven to fourteen feet high in places, where it would  
 be possible to construct a dam so as to give a limited water-power, but this could not  
 be done without flooding a large tract of land above the dam. Moose, jumping deer  
 and bears are very plentiful throughout the whole district.—*R. W. Cautley, D.L.S.,*  
*1908.*

There is a fair wagon road from Winnipegoside to Pine Creek settlement and  
**35.** Duck bay which runs northerly about one mile east of the easterly boundary of  
 this township and from which a few rough wagon trails and hay roads enter  
 this township on the east side. There is also a rough wagon trail cut through from the  
 Indian reserve to Cowan, a station on the Prince Albert branch of the Canadian  
 Northern railway, but this latter must be quite impassable during the summer on ac-  
 count of water. The soil consists of from four to ten inches of black loam overlying  
 sand or gravel and must be regarded as ranging between second and third-class and  
 as being more suitable for cattle raising than for grain growing. The surface is level  
 throughout and covered with brûlé and second growth poplar for the most part,  
 except in sections 1, 2, 3, 11 and 12, where there are some big alkaline hay marshes.  
 All along the west boundary of the township the surface consists of jackpine gravel  
 ridges alternating with long stretches of what looks like muskeg but cannot properly  
 be so described, being a covering of moss from six to eighteen inches thick, overlying  
 gravel, boulders and limestone shale. There is no marketable timber in this township,  
 almost all the original timber having been destroyed by fire. What there is consists  
 of second growth poplar chiefly, grown up since the date of the last big fire, ap-  
 parently about sixteen or seventeen years ago. What timber remains consists of poplar  
 from six to ten inches, with some spruce along the river banks. There are numerous  
 hay sloughs throughout this township, on some of which the Indians put up large  
 quantities of hay every year. This hay is distinctly what is called 'slough' hay, there  
 being very little of what may be called hay meadow, i.e., lands which grow red-top,  
 blue-joint or other upland hay. The township is abundantly watered by three large  
 streams, South Duck river, North Duck river and Pine river, all of which are per-  
 manent and are somewhat alkaline. South Duck river is about eighty feet wide, with  
 banks from eight to fourteen feet high, and varies in depth from one to seven feet  
 with a current that varies from one and one-half miles per hour to an imperceptible  
 rate. The other two are from forty-five to sixty feet wide, and in depth, height of  
 banks and current are similar to South Duck river. On all these streams it is noticeable  
 that in spring the water must at times overflow their banks, but these occasions  
 are comparatively rare. There are no available waterfalls or powers in this township  
 and no sign of minerals or quarrying stone was seen. There is abundant wood fuel  
 to last settlers for many years to come. Moose, deer and bears are found in this  
 township and there are beaver colonies in active operation this fall on all three of the  
 above mentioned creeks, a fact which reflects a great deal of credit on the local traders,  
 hunters and Indians, when it is considered that one of these colonies on South Duck  
 river is within four miles of the trading post at Pine Creek settlement.—*R. W. Cautley,*  
*D.L.S., 1908.*

This township may be reached by wagon road from Cowan or Pine Creek settle-  
**36.** ment. The road is not good in wet seasons. The soil is mostly clay loam and  
 is suitable for mixed farming or ranching. The surface is wooded, except  
 along the North and South Duck rivers, in the northern two-thirds of the township.

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Along the shores of these rivers is marshy land, which extends for half a mile on each side. Some parts of these lands yield excellent and abundant supplies of hay. Parts of sections 33, 34, 28 and 27 are also marshy and supply much hay in dry seasons. The timber is mostly poplar, with a few spruce and tamarack. The poplar ridges nearly always have a dense under-growth of hazel, willow and red alder. The water in the Duck rivers is fresh in summer, but becomes saline in winter. Lake Ducharme and Salt lake are also saline. The marshy land along the Duck rivers is flooded at times to a depth of about two feet. In sections 2, 11, 12 and 13, the banks of the South Duck river are fairly high, but the stream is sluggish. In sections 3, 10, and 11, the banks of the North Duck river are high and the stream might be dammed to afford water-power. The width here is about seventy feet, while the depth varies from one to six feet. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood is plentiful for fuel. No stone-quarries nor minerals exist. Moose and jumping deer are scarce in this township; ducks and partridges are plentiful. *C. B. Allison, D.L.S., 1911,*

The eastern half of this township is mostly covered by Duck bay of lake 37. Winnipegosis. Several kinds of fish are said to abound in the lake, the principal and most abundant being pickerel and whitefish. Suckers are also found in large numbers. Extending almost from the northern to the southern end of Duck bay are Long island, Gaspar island and, at the southern end of Long island, Balsam island. These islands are partly wooded and partly marsh with tall reeds. In season ducks and geese are plentiful. The timber on the islands is nearly all small, but there is evidence that large timber was cut, perhaps fifteen years ago. The western half of the township is covered by woods and open salt marshes, the latter forming a few shallow lakes. The best route to this township is, in winter, by sleigh over lake Winnipegosis and in summer by canoe or small steamer. The soil is mostly shallow loam on clay or sand with numerous stones. It might be suitable for mixed farming if the stones were cleared. There is some timber suitable for lumber, spruce being the most plentiful. On sections 6, 7, 8 and 18 there is good building timber for settlers. In other parts it is small. In dry seasons hay may be cut in the marshes in any part of the township. The water in Duck bay is fresh, but in the small lakes it is very alkaline. The water in Insect river is fresh in summer, but alkaline in winter, when the muskegs are frozen. The land along the river is liable to be flooded to a depth of three feet in the spring. There are no waterfalls, but limited water-power might be developed in Insect river. The climate is similar to that of southern Manitoba, though frosts occur a little earlier. Wood for fuel is plentiful. There are no stone-quarries. Moose, jumping deer and bears abound.—*C. B. Allison, D.L.S., 1911.*

(North third.)—In summer this township may be reached by boat from Winnipegosis, situated at the southern end of lake Winnipegosis. In winter the bush road may be followed from Winnipegosis to Duck bay and thence by a bush trail leading northwesterly to the northwestern part of this township. The northeastern part of the township may be reached by following the lake from Duck bay. About half of section 36, the eastern part of section 25, the northeastern part of section 35 and the southwestern part of section 31 are rolling and covered with poplar, spruce and birch of an average diameter of about six inches. The soil is black loam to a depth of about four inches with a clay subsoil, and would be suitable for farming. The remainder of the northern two tiers of sections is swampy, covered with spruce and tamarack from four to six inches in diameter and is too wet to be useful for farming. There are small inland lakes of fresh water occupying parts of almost every section in this part of the township. Lake Winnipegosis occupies a small portion of section 25. There are no streams in the township. The low land is liable to be flooded to some extent in early spring. The climate, as far as could be ascertained from fishermen living in the neighbourhood, is suitable for the growing of all kinds of grains and vegetables. There is sufficient wood for fuel throughout the township to last the settlers for a considerable time. There is no stone, and no indications of minerals were found. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance. Whitefish, pickerel and jackfish are plentiful in lake Winnipegosis.—*J. E. Jackson, D.L.S., 1913.*

The best route to this township is from Duck bay by the Pelican Lake and Swan Lake trails, which are passable only in winter. The surface is mostly scrubby, large timber being found on the west side of section 10 and on the east side of section 9

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and a little also at the northeast corner of section 11. The soil is a stony clay loam, and is suitable for mixed farming. In dry seasons hay might be cut on sections 2, 11 and 12. The timber, mentioned above, is suitable for building purposes. Water is present in a number of small lakes; it is all fresh and the supply is permanent. Most of the township is always covered with water to a depth of three feet. No water-power can be developed. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood may be obtained for fuel. No stone-quarries nor minerals were seen. Moose, bears and jumping deer abound. Fish were seen at least three miles from the lake, in the tamarack swamps.—*C. B. Allison, D.L.S., 1911.*

There is no way of reaching this township with a team in summer as it is sur-

**39.** rounded by swamp and muskeg for a considerable distance. In winter the bush road may be followed from Winnipegosis to Duck bay, and thence by a winter trail in a northwesterly direction. Another winter route from Duck bay is by lake Winnipegosis to a point a little south of the correction line; thence by a road which was cut in a westerly and northwesterly direction to the southeastern part of section 1 of this township, and thence across a lake through sections 2, 11 and 10 to Hamilton lake in section 3. There is a toboggan trail leading in a northwesterly direction from the northwestern part of section 8 of the township to the south to Pelican lake in section 33 of this township. The southwest part of the township, including section 6, the northwestern part of section 5 and the western halves of sections 7 and 18, is rolling land, consisting of clay and stones. There is another clay ridge about one-half mile in width and extending through sections 34, 27, 22, 21, 16, 9, 4 and 5; also another of about the same width in sections 3, 4, 9 and 10. This land is fairly good for agricultural purposes. The remainder of the township is principally swamp and is too wet to be of any use as farm land until it is drained. The timber is small, nowhere exceeding about eight inches in diameter, and it would therefore be advisable to reserve it for the future needs of settlers. The ridges are covered with poplar, spruce and birch of an average diameter of six inches. There is some jackpine from six to eight inches in diameter in the southwestern part of the township. The swamp, which includes all of the eastern half of the township and a strip one-half mile wide along the stream flowing in a northerly direction into Pelican lake, is covered with spruce and tamarack from four to six inches in diameter. There is no hay. Pelican lake occupies nearly all of the northwest quarter of the township, and nearly half of the easterly third is taken up by Magnolia, Brocom, Albion, Emerald and Holditch lakes and two other lakes not named. In the south there are also two small lakes, called Hamilton and Tuxedo, and in the west, in sections 7 and 8, Prospect and Melrose lakes are found. These lakes all contain fresh water and are surrounded by tamarack swamps. A small stream flows through sections 6, 5, 8, 17 and 20, where it enters Pelican lake. It is a fresh-water stream about sixty feet wide and four feet deep, and has very little current except in flood time. The low-lying lands would probably be flooded in the spring. No water-powers exist. The climate is suitable for the growing of all kinds of grain and vegetables, and there is not much danger of summer frosts. There is sufficient wood to supply the settlers with fuel for a considerable length of time. No indications of minerals were seen. The quantity of stone is not sufficient for quarrying purposes. Moose are quite plentiful and elks are occasionally seen. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are also quite plentiful. Whitefish, pickerel and jackfish are caught in large quantities in Pelican lake.—*J. E. Jackson, D.L.S., 1913.*

This township cannot be reached by teams in summer on account of the swamp

**40.** in the surrounding townships. In winter the bush roads may be followed from Winnipegosis, situated at the south end of lake Winnipegosis, to Duck bay, and thence by the lake to the 11th base line. From here a road was cut across the northely part of township 40, range 18, to section 32 of the township to the west; thence southerly to the southeast corner of section 24 of this township, and thence through the northerly parts of sections 13, 14 and 15 to Pelican lake, which occupies the western half of this township. A large portion of the remainder of the township consists of spruce and tamarack swamps, the average diameter of the timber being about six inches. There are a few small ridges covered with poplar, birch and tamarack of an average diameter of about eight inches in sections 3, 4, 10, 11, 12, 14, 22, 26 and 34. The soil on these ridges is chiefly clay and stones, and would make fairly good farm land. It would be advisable to reserve the timber for the future need of settlers, as it is too small for lumbering purposes. There is no hay except a few small patches

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near Pelican lake. The water of the lake is fresh. There are no large inland lakes and no streams. The climate as far as could be ascertained from fishermen living in the neighbourhood is suitable for the growing of all kinds of grains and vegetables. There is sufficient wood for fuel everywhere to last the settlers for a considerable time. There are no stone-quarries nor minerals. Moose, jumping deer and elks are quite plentiful. Lynxes, foxes, coyotes, weasels, muskrats, rabbits, partridges and prairie-chickens are found in abundance. Whitefish, pickerel and jackfish are plentiful in Pelican lake.—*J. E. Jackson, D.L.S., 1913.*

This township is reached by the Hudson Bay railway. The soil is generally stony but in sections 7, 8 and 9, along a stream flowing in a southwesterly direction into Little Cormorant lake, there is some good land. The surface is wooded throughout with small second growth spruce, poplar and tamarack which are generally found growing very thickly where there is considerable jackpine deadfall. Patches of spruce and tamarack up to eight inches in diameter occur frequently. Along the creek already mentioned spruce ranging from twelve to thirty inches in diameter was encountered. There is plenty of fuel to supply the settlers in the spruce and jackpine growths. No stone-quarries, coal, nor other economic minerals were found. The climate is similar to that of northern Manitoba generally. Game is very scarce.—*P. B. Street, D.L.S., 1913.*

## RANGE 21.

(*North third.*)—The road from Pine river to the township is impassable in summer, but good in winter. The surveyor cut a fairly good summer road from the trail between Cowan and Pine Creek settlement due south to near the northeast corner of section 33, of this township. The soil is clay loam, and where dry might be used for mixed farming. The surface is wooded throughout, but the timber is small and suitable only for fuel or building purposes. A little hay might be cut along Pine river, which is about forty feet wide, two feet deep, with a current of about two miles per hour. The water is excellent. The banks are high, and the stream might be dammed to afford water-power. The land is not liable to be flooded. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood for fuel is plentiful. No stone-quarries nor minerals were seen. Moose and bears as well as partridges are plentiful.—*C. B. Allison, D.L.S., 1911.*

This township may be reached by wagon road from Cowan. The surface is wooded, but the timber is not very large and is suitable for fuel or building purposes. Hay might be cut in a dry season in almost any of the sloughs. The water is fresh and plentiful. Flowing in from the west are the South Duck and Selater rivers, which unite about the centre of the township. From this point, the banks are high, and the stream might be dammed for water-power. The river is about fifty feet wide, three feet deep and has a current of about two miles per hour. The supply of water is permanent. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood is plentiful for fuel. No stone-quarries nor minerals were discovered. Moose, bears, beavers and jumping deer abound.—*C. B. Allison, D.L.S., 1911.*

(*East outline.*)—This line runs through a level country timbered with spruce, jackpine, poplar and tamarack, from four to eight inches in diameter. For the northerly five miles of its length the soil is very poor, consisting, where there is any, of a peaty loam overlying gravel, big boulders or limestone shale, while the surface is much broken by muskegs. These five miles are quite unfit for settlement; on the other hand the east boundary of section 1, across which the westerly branch of South Duck river flows in an easterly direction, seems to be good farming land. No evidence of coal, minerals nor quarrying stone was found. Moose, jumping deer and bears are very plentiful throughout the whole district. Both branches of Duck river have banks from seven to fourteen feet high in places, where it would be possible to construct a dam so as to give a limited water-power, but this could not be done without flooding a large tract of land above the dam.—*R. W. Cautley, D.L.S., 1908.*

(*Subdivision.*)—This township may be reached in summer or winter by wagon road from Cowan. The soil is mostly all muskeg and covered with water during most of the summer. It is timbered throughout with small trees, an occasional large spruce occurring along the different branches of the North Duck river. Hay grows in the swamps,

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but the ground is too soft and wet to permit of its being cut. The water is fresh. The south branch of the North Duck river is about fifty feet wide, varying from six inches to six feet in depth, and flows about three miles per hour. On the easterly side of the township the banks are well defined and the stream could be dammed to afford water-power. On the westerly half, however, the land along the North Duck river is at times flooded to a depth of four feet for a distance of a mile on either side. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood is plentiful for fuel. No stone-quarries nor minerals were discovered. Moose, bears and jumping deer are very plentiful. Beavers too are often seen busily at work along the North Duck river.—*C. B. Allison, D.L.S., 1911.*

(*East outline.*)—This line runs through level country timbered with poplar,

- 36.** balm of Gilead, spruce, tamarack, jackpine, and birch of a size suitable for fence posts or fuel. The soil is very poor, consisting of a light loam about six inches deep overlying a bright red, clear sand, while the surface is much broken by muskegs. The country is quite unfit for settlement. No evidence of the existence of coal, minerals or quarrying stone was seen. Moose, jumping deer and bears are very plentiful throughout the whole district.—*R. W. Cautley, D.L.S., 1908.*

This township may be reached by wagon road from Cowan. The soil, where not covered with water, is very stony, and might be used for grazing. The surface is wooded with tamarack, spruce, pine and small poplar. The timber is all quite small. There is a little hay along Insect river, a stream about twenty feet wide and two feet deep flowing northward through the township with a current of about two miles per hour. In the northern part it might be dammed to afford water-power. The water is all fresh. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood is plentiful for fuel. No stone-quarries nor minerals were discovered. Moose, bears and jumping deer abound.—*C. B. Allison, D.L.S., 1911.*

(*East outline.*)—The soil along this line is clay loam, suitable for mixed farm-

- 37.** ing. The surface is timbered with poplar, spruce and tamarack, suitable for building purposes. There is no hay. There is no water except in the Insect river, the water of which is fresh in summer and salty in winter. The land is not liable to be flooded. Water-power might be developed to a small extent. The climate resembles that of southern Manitoba, with perhaps earlier frosts. Wood is plentiful for fuel. There are no stone-quarries nor minerals of economic value. Moose, bears and jumping deer are very plentiful.—*C. B. Allison, D.L.S., 1911.*

This locality is reached by the Hudson Bay railway which passes through the

- 60.** western portion of the township, and also by winter roads across Cormorant lake. The central part of the township is taken up by Little Cormorant lake. The land between this lake and the west boundary of the township is mostly rocky and covered with a dense growth of poplar, spruce and jackpine, ranging up to twelve inches in diameter. The land east of Little Cormorant lake is less stony, and the country rises gradually to the northeast and slopes off to the southeast. A small stream flows into Little Cormorant lake from the northeast, and the lake drains eastward by a creek flowing into Moose lake. Some good land is found in the northeast quarter of the township. The soil here is clay loam, and will grow all crops. West of Little Cormorant lake the soil is light and very stony and the land, therefore, is of doubtful value. Some large spruce from twelve to thirty inches in diameter was found along a stream in the northeastern quarter of the township, but a great deal of it is being cut for railway ties. Apart from this the timber is of no value except for fuel. No hay was seen except along the creek draining Little Cormorant lake where a small amount of a poor quality may be had. The water in Little Cormorant lake is very good. On the east side of the township there is a considerable amount of tamarack and spruce swamp, the water in which is poor. No water-power can be developed. The climate is good. No summer frosts occur. No stone-quarries nor minerals exist. Moose, caribou, rabbits, partridges, prairie-chickens, ptarmigans, ducks and geese are plentiful. The lake is well stocked with whitefish, jackfish, pickerel and trout.—*P. B. Street, D.L.S., 1913.*

The Hudson Bay railway provides a ready means of access to this township.

- 61.** Winter trails across Cormorant and Atikameg lakes give winter communication with Pas. The soil is clay and would be suitable for agriculture if the moss were removed and the country drained. The surface is generally undulating and has

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sufficient slop to ensure natural drainage, but owing to the deep moss the water has no chance to drain off, with the result that over nine-tenths of the land is swampy. Along a stream in sections 1 and 12 some spruce ranging from twelve to thirty inches in diameter is found, but other than this no large timber was encountered. Spruce, jackpine, tamarack and poplar about five inches in diameter are the chief varieties and in some places the growth is very dense. No hay lands were seen. Little Cormorant lake which occupies part of sections 4 and 5, provides good water for household use. The water which is found so plentifully all over the township in the spruce and tamarack swamps and muskegs is unfit to drink. No water-powers exist. No stone-quarries nor minerals were found. Fuel is very plentiful in the form of wood but no coal seams were seen. The climate is warm and wet in summer and very cold in winter. Summer frosts do not occur as a rule. Moose, caribou and small game of all kinds are plentiful.—*P. B. Street, D.L.S., 1913.*

## RANGE 22.

- 33.** This township is almost entirely a tamarack swamp. The timber is of small growth and of no commercial value.—*M. McFadden, D.L.S., 1899.*

The northeastern portion of this township is nearly all muskeg, which is comparatively open in some places while in others it is covered with willows and spruce and tamarack from four to eight inches in diameter. The Canadian Northern railway used up most of the valuable timber; that remaining is as a rule short, faulty and of very little value. There is considerable windfall in the district, showing the result of fires. The land is third-class, consisting of black loam or muck up to twenty inches in depth with a sand or gravel subsoil. North Pine river flows easterly across the township. Owing to the marshy wet state of the land it is not likely that settlement can be expected for a long time. The Canadian Northern railway crosses the southwestern part of the township.—*J. W. Fitzgerald, D.L.S., 1900.*

- 34.** This entire township is a swamp, covered with partly burned tamarack, and is practically worthless.—*M. McFadden, D.L.S., 1899.*

This township is reached by a route through sections 16, 9 and 4 of township 35, range 22 and through sections 33, 34, 27 and 22 to South Duck river. The trail was very rough and through bad muskeg full of deep holes. The soil near South Duck river is fairly good and could be drained so that it would make good farm land. It is a black loam but the subsoil is quite often rather sandy. The surface is rather flat, so much so that the greater part of it was flooded in July. However, if this were drained it would make very good farming land and some good hay meadows. Away from the river it is nearly all swampy or muskeg and is very wet. It is of little use unless drained, which would be hard to do as the country is so flat. The surface is generally covered with scrub but some small openings are found towards the west and south. There is no timber of any account, but a few fair-sized spruce trees, eight to ten inches in diameter, are growing in the northwest corner and considerable dry standing tamarack from six to ten inches is scattered here and there over the township. Hay is fairly plentiful along the south and west sides. Numerous hay meadows are found along the west side which are used by the Galicians at present. If the country were drained there would be quite large meadows available when the bush was cleared off but the hay would be only of fair quality. There are also some sloughs in the eastern part that would make hay meadows if drained. The water is all fresh and very plentiful. The only stream of any account is South Duck river, which is about twenty-five feet wide, two feet deep and has a current of about two miles an hour. The only wide part is where two streams have joined about the north side of section 16; it narrows down and almost disappears in section 26. It is dammed up by beaver in several places about three feet above its usual level. The land is very liable to be flooded almost entirely except close to the wide part of the river where the banks are about five feet high and the channel is about thirty to forty feet wide. In July the greater part of the township was flooded to a depth of one foot and in some places deeper. There are no water-powers. The climate was very cold in November and December. It was forty-two degrees below zero once and was often as low as twenty to thirty-five degrees below zero. There was a great deal of snow. The frost was only in six or eight inches at the most. The only fuel is wood, which is plentiful and of good quality. Tamarack is the best and is scattered all over the township. No stone-

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quarries nor minerals were found. The only game seen was moose and rabbits, but there were a number of beavers in the river and the Indians were trapping lynxes. The township is so flat that it will not be of much use in wet years.—*W. G. McFarlane, D.L.S., 1906.*

This township is one continuous swamp and is entirely unfit for cultivation.

- 35.** It is timbered with small tamarack which has been partly burnt and is now practically of no value.—*M. McFadden, D.L.S., 1900.*

The route followed into this township was from Cowan station along the south side of North Duck river by a trail. It was rather rough on account of fallen logs, and in places it runs through grassy sloughs. A road was cut across the river in section 16 and north as far as the north chord. The river bottom has some quicksand and the water at the ford is about three feet deep. The north road is rather rough, and when near the north chord it becomes very wet and soft, as it is all tamarack swamp. The soil is in general not very good, but along the river there is a strip of good black loam and in some places a good clay subsoil, which would make excellent farming land. Farther back from the river it becomes very wet and swampy. Here the soil is usually a black loam about six inches deep with a sandy subsoil. On some of the slight elevations covered with jackpine nothing but sand is found. Some of these parts would be too wet and others too sandy to be of much use for farming. The surface is usually scrubby, but a few large spruce and poplar trees grow along the river. In some places there is little other than dry standing tamarack and windfall. The timber is chiefly spruce, with a little balsam, birch and poplar. It is from ten to twenty inches in diameter, but is not at all plentiful, being found only near the river. Hay is fairly plentiful near the river, as there are quite a number of hay sloughs and some meadows, but these have usually considerable brush and burnt logs in them. Some of the swamps if cleared and drained would produce a considerable quantity of hay but it would be of a rather coarse quality. All the water is fresh, and very plentiful and permanent. North Duck river is the only stream of any account; it is usually about thirty feet wide and on an average one and one-half feet deep with a current of about three miles per hour. It is very winding and the banks are usually about ten feet high. Away from the river the country is usually very level or almost flat, and nearly all of it, with the possible exception of some slight elevations covered with jackpine in sections 28 and 29, is liable to be flooded during a very wet season. The water might be about one foot deep. There are no water-powers available. In October and November there was considerable rain and a great deal of snow, some of which was very wet. The snowfall was so great that it kept the ground from freezing, and made it very sloppy and wet working even when comparatively frosty. The lowest temperature noted was twenty-six degrees below zero. Cold winds are often experienced. Wood is the only fuel and it is found in abundance. Tamarack, spruce and poplar are the chief kinds. No stone-quarries exist and there is very little stone of any kind in the township. No minerals were found. The only kind of game seen was moose and rabbits. The township is so flat that it would be rather difficult to drain it except near the river.—*W. G. McFarlane, D.L.S., 1906.*

The Prince Albert branch of the Canadian Northern railway passes a few

- 36.** miles west of the southwest corner of this township. There are no summer trails through the township. The soil is very poor, being principally sand, with gravel and stone, and with a very light deposit, in some places, of a few inches of black loam. It would be difficult to say for what kind of farming or other industry such a combination would be suitable. The whole surface is covered with a light growth of jackpine, spruce, tamarack and scrub, small jackpine predominating. The spruce and tamarack are about equally distributed. All the timber is small, rarely attaining seven inches in diameter, although a few small bluffs containing some eleven-inch timber were met with. The whole township was burned over some time ago and a good many of the dead trees are still standing. There is no running water. The water in the sloughs and ponds is generally fresh. There are no water-powers. Hay may be cut around some of the sloughs but in no great quantity. There are no large hay marshes. No information was obtained as to climatic conditions during the summer months. During the winter it was exceedingly cold, but the air was clear and dry. Very little snow fell during the time of the survey. In the fall of 1904 the snow

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fell to the depth of one foot before the frost came. Fuel consists of small spruce, tamarack, and jackpine, both dry and green. No minerals were seen. Game consists of moose, which are numerous.—*H. B. Proudfoot, D.L.S., 1904.*

The southwest corner of this township is about three miles from the Prince  
**37.** Albert branch of the Canadian Northern railway at a point about midway between Cowan and Fishers stations. There are no summer trails leading through or into it. The soil is principally sand, gravel and stones with slight deposits of black loam in a few places. It is very poor and on account of the stones would be very difficult to cultivate. The surface, level, rolling and undulating, is mostly covered with spruce and tamarack swamps separated by low jackpine ridges. All the timber is small being mostly three inches to five inches in diameter although trees as large as ten inches were seen. Spruce, tamarack and jackpine predominate, and some small birch, balm of Gilead, poplar and balsam were met with near the north boundary. Hay can be cut around the sloughs or grass swamps, but there are no large hay meadows. The water is generally fresh in the swamps. A few small creeks were crossed in the northwesterly part of the township but they, as well as the sloughs, were frozen to the bottom. There are no water-powers. No information was obtained regarding the weather in this immediate locality during the summer, except that summer frosts are not generally prevalent. During the time of the survey, (January, 1905), there were no storms of any kind, the days being generally clear; the thermometer never registered higher than eight degrees below zero. No stone-quarries nor minerals were seen. Moose are very plentiful.—*H. B. Proudfoot, D.L.S., 1905.*

(*North outline, ranges 22 and 23.*)—Extending for ten miles easterly from the ridge in section 36, range 24, there is swamp and muskeg land of a similar nature to that on the west side of the ridge. On the east side of this swamp along the shore of Moose lake there is some high land, where a small quantity of spruce, tamarack, poplar and jackpine up to six inches in diameter, is found. The soil consists of sandy loam, with considerable rock. Moose lake is a deep-water lake of large expanse, and is one of the principal fishing grounds in this part of the country. Whitefish, jackfish and trout are caught in large numbers.—*E. W. Robinson, D.L.S., 1911.*

This township may be reached either by the Hudson Bay railway or by winter trails across Cormorant lake. The surface is flat and mostly timbered. The northwestern portion of the township is taken up by Cormorant lake and the eastern and southeastern portions are occupied by the large swamp which extends from the lake to the Saskatchewan river. The soil is not adapted to farming, consisting generally of stony clay. The land in the swamps is covered with a deep growth of moss which frequently reaches a depth of four or five feet. This moss holds the water like a sponge and prevents natural drainage. The timber varies from two to ten inches in diameter and is found everywhere except on the marsh area. It is of no value for lumber but is very suitable for cord-wood. Spruce, poplar, birch, tamarack and jackpine are the chief varieties. No hay exists except on the large marsh in the east portion of the township where it is of very inferior quality. Water is plentiful everywhere. Cormorant lake provides the only good drinking water in this township. The water in the swamps and marshes generally causes sickness to people who are reckless enough to use it. No water-powers exist. The climate is good. No summer frosts occur. Fuel is very plentiful in the form of tamarack, jackpine and poplar. No indications of coal or oil were seen and no stone-quarries exist. No economic minerals or indications thereof were found. Moose, caribou, bears and all the small game common to this district are found in this township.—*P. B. Street, D.L.S., 1913.*

This locality is reached by the Hudson Bay railway which runs through the  
**60.** southeastern part of the township, and also by winter roads across Cormorant lake. The soil is rather stony and its value for agriculture is very doubtful. The surface is largely taken up by Cormorant lake. In the southeast portion a considerable area is occupied by the big marsh which extends from Cormorant lake to the Saskatchewan river. The remainder of the township is rolling and rocky, and is covered with a dense growth of spruce, poplar and jackpine up to ten inches in diameter. This timber is of no value for lumber, but is suitable for cord-wood. Cormorant lake supplies most of this township with the best of water. There is also plenty of water in the marsh in the southeast portion of the township, but it is stagnant and

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unfit to drink. No water-powers exist. No stone-quarries nor mineral deposits were seen. Fuel is plentiful in the form of wood as described above. There is no hay of any value. Moose, caribou and small game, such as ducks, geese, partridges, etc., are plentiful.—*P. B. Street, D.L.S., 1913.*

RANGE 23.

This township has been swept by fire and is now covered with brûlé and windfall; a second-growth of poplar, jackpine, birch and spruce is springing up.

- 33.** The soil is light sandy loam with a subsoil of sand and gravel. The township is well supplied with good water by numerous creeks and springs.—*J. L. Reid, D.L.S., 1899.*

The soil of this township consists of a light sandy loam overlying sand and

- 34.** gravel. The whole country has been swept by fire, leaving only a few bluffs of green timber in the southwest and west portions of the township. There is an abundance of good water in the numerous springs and creeks.—*J. L. Reid, D.L.S., 1899.*

This township is also in the fire-swept district and is consequently covered

- 35.** with miles of fallen timber. A few small bluffs of green timber are scattered throughout the western portion. The soil is a light sandy loam overlying sand and gravel. An abundance of good water may be obtained in the numerous springs and creeks.—*J. L. Reid, D.L.S., 1899.*

The southern two tiers of sections of this township consist of somewhat rolling land covered with heavy windfall and overgrown with jackpine and young poplar. Practically the whole northern part is alternately spruce and tamarack swamps and muskegs. The Canadian Northern railway cuts off approximately the southwest quarter of the township. Sinclair river, a tributary of Swan river, flows northerly through the western portion, leaving the township on the west boundary of section 31. This township is not very suitable for agricultural purposes, the land being rated as second and third-class, but the actual value of the country has been very much increased by the construction of the railway as there are great quantities of valuable timber throughout this district.—*J. C. DesMeules, D.L.S., 1899.*

The Prince Albert branch of the Canadian Northern railway is a few miles

- 37.** south of the southwest corner of this township. Fishers is the nearest station. There are no summer trails. The soil is very poor, being sand, gravel and stones, with a very light deposit of black loam in some places. The swamps are very soft. The whole of the township is timbered with spruce and tamarack averaging between five inches and six inches in diameter, in swamps—which comprise about three-quarters of the area—with ridges of jackpine, and some poplar, birch and balm of Gilead. The different timbers are about equally distributed. Some few bluffs of large timber were encountered, but their areas are small. Hay can be cut around most of the grass swamps and sloughs but there are no large marshes. There are a few small brooks, but at the time of survey they were frozen to the bottom so the quality of the water could not be ascertained. In the ponds the water is slightly alkaline. There are no water-powers. The climate was exceedingly cold at the time of the survey, but there were no storms. Snow did not fall between January 1 and February 18 in this district. On account of the large amount of swamp lands it is probable that summer frosts would be prevalent. Wood for fuel is in abundance. No stone-quarries nor minerals were seen. The game consists of numerous moose, jumping deer, small fur-bearing animals, chickens and partridges.—*H. B. Proudfoot, D.L.S., 1905.*

This township is reached by the Hudson Bay railway. The soil is stony and

- 58.** of little use for agriculture. The surface to the north of the railway is wooded with spruce, poplar, jackpine, birch and tamarack up to ten inches in diameter and averaging about five or six inches. South of the railway there is very little wood of value even as fuel, most of the surface being open marsh land with numerous shallow lakes and ponds. This low land extends to the Saskatchewan river and is flooded in summer. Water is plentiful but of poor quality, it being necessary to boil it before drinking. A considerable portion of the surface is covered with a deep moss from one to four feet deep which holds back the water and prevents drainage. No water-powers exist. The climate is fair and no summer frosts occurred last year. Fuel

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is plentiful and consists of birch, poplar, jackpine and tamarack. A considerable quantity of cord-wood has been cut in this township. No stone-quarries exist, and no indications of minerals were noticed. The rock is all of limestone formation which is not likely to be mineralized. Moose, caribou and small game in general are found in season.—*P. B. Street, D.L.S., 1913.*

This locality can be reached either by the Hudson Bay railway or by winter

**59.** trail across Cormorant lake, which occupies a considerable area of this township. There is also usually a good winter road running from Pas through this township. The soil is rather stony, where it could be seen, and is generally buried to a considerable depth under the rank growth of moss which covers most of the land in this country. The surface is nearly all timbered, some large spruce and tamarack being found in sections 12 and 13 and some large spruce and jackpine in sections 26 and 23. No timber of value for lumbering purposes, however, was found. No water-powers exist. Water is plentiful everywhere, but only that in Cormorant lake is fit for domestic use. The climate is hot in summer and cold in winter. No summer frosts occur as a rule. Fuel in the form of wood is plentiful everywhere. No traces of minerals, coal, oil or natural gas were found. No stone-quarries exist. Moose and caribou are found and small game, such as ducks, geese, partridges and rabbits, is plentiful. A great deal of fishing is done in Cormorant lake, where whitefish, jackfish, trout and pickerel are caught.—*P. B. Street, D.L.S., 1913.*

## RANGE 24.

This township is in Duck mountain; that portion south of Duck river is rough and broken while that part north of the river is rolling. The soil is a light sandy loam overlying sand and gravel. Sufficient timber for settlers' use may be found in scattered bluffs along the muskegs and creeks but the greater part of the valuable timber was destroyed by fire some years ago. The district is well watered by numerous springs and creeks.—*J. L. Reid, D.L.S., 1900.*

The two southern rows of sections of this township are mostly occupied by **36.** Duck mountain which, as one might expect, are rough, hilly and broken, covered with thick dry timber, windfalls, and bluffs of large green spruce. The timber is mixed with an extremely thick growth of willow and alder. The remainder of the township, with the exception of a small coteau which extends east and west across the township, which is covered with good spruce and poplar, is a low burnt country overgrown with a high second growth and numerous bluffs of dry and green poplar. It is somewhat broken by the many hay, willow and tamarack swamps. A wagon road was cut through the northern part as far as Sinclair river, a distance of five and a half miles. This road may prove useful to settlers intending to locate here. Sinclair river, a stream about thirty links wide and eighteen inches deep, runs across sections 35 and 36. Several small tributaries of this river, water the centre of the township. The land, where dry, is good for agricultural purposes but over fifty per cent of the township is too wet to be of any use.—*P. R. A. Belanger, D.L.S., 1898.*

(*North outline.*)—The country along this line, running westward, is level for **37.** the first mile and a half and wooded with spruce and tamarack. The land then becomes rather swampy and has a growth of spruce, tamarack and very thick underbrush. Section 34 is somewhat drier supporting a good growth of poplar, willows and alder and an occasional bluff of spruce and poplar from six to eighteen inches in diameter. From section 33 to the northwest corner of the township the line runs mostly over spruce and tamarack muskegs. One bluff of spruce, birch and poplar about five chains in width and having trees from ten to eighteen inches in diameter, was intersected in sections 33 and 34.—*J. C. DesMeules, D.L.S., 1900.*

(*East outline.*)—This line runs northerly through a level country covered, on section 1 with spruce and poplar from six to eighteen inches in diameter, and from there as far as the northeast corner of the township with small tamarack and spruce.—*J. C. DesMeules, D.L.S., 1900.*

(*Subdivision.*)—The quality of the land in the western part of this township may be rated as first-class for farming purposes; that in the eastern part as second and third-class. The rich forest of large spruce and poplar which covers the township especially in the western portion, should be quite attractive to the lumbering and build-

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ing trades. The surface is nearly level being quite dry in the westerly portion but containing numerous muskegs along the eastern boundary. In places there are large patches of willows, alder and scrub intermixed with heavy windfalls. Sinclair river enters the township in section 2 and runs diagonally across sections 3, 4, 5 and 6.—*J. C. DesMeules, D.L.S., 1900.*

**38.** There is a graded road leading east from Bowsman, on the Canadian Northern railway, in township 38, range 27, to the southwest corner of township 38, range 25. From this point the Pelly trail may be followed to where it crosses the Swan river in section 22. From this point a road was cut through sections 26 and 25 to the northwest corner of section 30 of this township, and thence easterly through sections 30, 19, 20, 21 and 22. The graded road is fairly good, but both the Pelly trail and the road cut follow a number of sloughs and swamps, so that even in the driest season of the year one can take only a very light load. The Swan river may be forded in dry weather, but in the wet seasons, early spring and June and July, it is necessary to take supplies across in boats and make the horses swim. The greater portion of this township is very wet. These wet portions are mostly muskegs which are composed of moss and black muck and would make good land if drained. On the ridges the soil is first-class, and consists of a black sandy loam to a depth of from six to twelve inches with a clay subsoil. There will be no difficulty in draining this township to the Swan river, which crosses the township to the west. Sections 28, 29, 30, 20 and 21, the southeastern parts of sections 32 and 34, the eastern parts of sections 12, 13, 25 and 36, and parts of sections 5, 7 and 9 are rolling and covered with poplar, hazel and alder scrub. The remainder of the township is very wet, being nearly all spruce and tamarack swamp with alder and willow scrub and a few patches of open muskeg. The timber is not of much value commercially, as the most of it is small, and where large it is not of sufficient extent to warrant its being set aside as a timber berth. Sections 20, 21, 28, 29 and 30, the southeastern parts of sections 32 and 34, the eastern parts of sections 12, 13, 25 and 36, and parts of sections 5, 7 and 9 contain poplar of an average diameter from ten to fifteen inches. Sections 28, 34, 35, 36 and parts of sections 5, 7, 12 and 13 contain a considerable quantity of spruce from eight to twelve inches in diameter. The remainder of the township contains chiefly spruce and tamarack of from two to eight inches in diameter. Very little hay is to be found, as the open spaces are either mossy swamps or are covered with low scrub. There are a number of small creeks of fresh water which are not of much importance as they almost dry up in the dry season. There are no lakes, and the only other water to be found is in the muskegs and swamps. All of the swamps are flooded more or less in the wet season. This flooding is not caused by the overflowing of rivers or lakes, but by so much low land without a sufficient outlet. There are no water-powers. The climate is suitable for growing all kinds of grain and vegetables and is not especially subject to summer frosts. Wood is the only fuel obtainable, and there is sufficient to last the settlers for a considerable time. There are no stone-quarries; in fact, hardly any stone can be found anywhere in the township. No indications of minerals were observed. Moose, jumping deer and elks are often seen, and weasels, muskrats, foxes, coyotes and martens are trapped by the Indians. Rabbits and partridges are found in abundance in the autumn and winter.—*J. E. Jackson, D.L.S., 1913.*

**39.** There is a graded road leading from Bowsman on the Canadian Northern railway in township 38, range 27, to the southwest corner of township 38, range 25. From this point the Pelly trail extends across townships 38 and 39, range 25, and enters this township in the western part of section 19. It then crosses the township, keeping a short distance from the Swan river through sections 19, 29, 33 and 34. The Pelly trail branches in section 22, township 38, range 25, crossing the Swan river and extending through sections 26 and 36. The easterly branch enters this township in section 6 and passes through sections 7 and 18, joining the main trail again in section 19. A wagon road has been cut from the Pelly trail in section 18 through sections 17, 16 and 15. The graded road is fairly good but the Pelly trail follows a number of sloughs and muskegs and only small loads can be taken over it even in dry weather. Swan river, in section 19 where the two branches of the Pelly trail join, may be forded during dry weather as it is then not more than two or three feet deep. On either side of the Swan river there is a strip of good, dry, level land about twenty chains wide, covered with poplar and maple from six to eight inches in diameter. South of this there is a strip from one-half to three-quarters of a mile wide which is wet and covered with willow and alder. The westerly parts of sections

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2, 11, 4, 14, 23 and the easterly parts of sections 5, 15, 22 and 26 (averaging about half of each section) are swamp, covered with spruce and tamarack from four to eight inches in diameter. This area is mossy and wet, and will be unsuitable for farm land until drained. In flood time the Swan river is so high that it would be impossible to drain this area until the outlet of the river has been improved. The remainder of the township south of Swan river is slightly rolling land covered with poplar averaging seven inches in diameter. The soil in this area consists chiefly of black loam from six to eight inches deep with a clay subsoil, and will make excellent farm land. That part of the township to the north of Swan river is mostly low and wet. The greater part of it is covered with tall willows with some open spaces consisting of very wet hay meadows. The northeastern part of section 29 and the southeastern part of section 32 is good dry, level land covered with poplar up to ten inches in diameter. The low-lying lands in this part of the township are liable to be flooded and cannot be drained at present as Swan river has not a sufficient outlet. The timber is mostly small and of very little commercial value, being suitable only for fuel. There is sufficient to supply the settlers with fuel and timber for buildings for some time. There are several large hay meadows in the northwestern part of the township but they are so wet that hay can be made only in the latter part of a very dry season. There are a few small hay sloughs scattered throughout the township which dry up late in the season. Swan river enters the township near the southwest corner of section 19 and flows through sections 20, 29, 33, 34 and 35. It averages about two chains in width and is from three and a half to ten feet in depth. The current varies from one-half to two miles per hour. The low-lying land near the river is flooded to a depth of from one to four feet at high-water. There is a creek averaging about eight feet wide and three feet deep, which flows through sections 6, 7, 18 and 19 and empties into Swan river. The water is fresh and flows at the rate of about one-half mile per hour. Another creek, flowing north across the northwestern part of section 31, is about thirty feet wide and seven feet deep and flows at the rate of about two miles per hour. There are a number of smaller creeks averaging about three feet wide and two feet deep in sections 30, 31, 32, 35, 8, 12 and 22. These all contain fresh water and have a current of from one to two miles per hour. No water-power can be developed. The climate is suitable for growing all kinds of grain and vegetables. It is not especially subject to summer frosts. Wood for fuel is available throughout the township. No stone-quarries nor minerals were found. Moose, jumping deer and elks are often seen, and weasels, muskrats, foxes, coyotes and martens are trapped by the Indians. Rabbits and partridges are found in abundance in the autumn and winter. Jackfish, goldeyes and a few whitefish are found in Swan river.—J. E. Jackson, D.L.S., 1913.

There is a graded road leading east from Bowsman on the Canadian Northern 40. railway to the southwest corner of township 38, range 25. From this point the Pelly trail may be followed at a short distance from Swan river, across townships 38 and 39, range 25, and township 39, range 24, entering this township at the southeast corner of section 2 and thence crossing sections 1 and 12. There is a trail branching off from the Pelly trail in section 32, township 39, range 24, and passing through sections 4, 9, 15, 23, 27 and 34 of this township, but both it and the Pelly trail are so wet that they can be used in very dry weather only, and then for very small loads. The soil is practically all black muck from one to two feet deep with a clay subsoil, but it is so wet that there is practically no land suitable for farming at the present time. In the southern parts of sections 2 and 4 there are some hay meadows that are dry enough for making hay, and for pasture late in the season, but the rest of the township is practically all wet, even in the driest part of the year. It would, however, be good land if it were drained. The rivers at present have poor outlets and are very sluggish. This area could be drained by dredging Shoal river which connects Swan lake and lake Winnipegosis. This would provide a good outlet for the rivers and the whole township could be easily drained and would make first-class land. There is some small poplar from three to six inches in diameter in sections 1, 4, 5, 6, 7 and 8. What little timber there is in the township is so small that it could be used only for fuel. The water in the lakes and rivers is chiefly fresh. Most of it is brown in colour owing to the vegetable matter which it contains. There is alkaline water in the sloughs near Swan lake. Swan lake occupies approximately the northeast quarter of the township. Swan river, which crosses sections 1 and 12, is about two chains wide and ten feet deep. Kirk river, crossing sections 3, 2 and 12, and flowing into Swan lake in section 13, is about one and a half chains wide and ten feet deep. Crockett creek, flowing through sections 10, 15 and 14 into Swan lake is about one

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chain wide and eight feet deep. Dolane creek flowing through sections 4, 9, 16, 15 and 22, into Heatley lake is about one chain wide and five feet deep. All these streams flow at the rate of about one-half mile per hour. Woody river flows through sections 7, 18, 17, 20, 21, 28, 33 and 34 and through the next township into Swan lake. It is about one chain wide and nine feet deep and flows at the rate of about one-quarter of a mile per hour. Birch river crossing the township through sections 19, 30, 31 and 32, is about one chain wide and eight feet deep and has a very slow current. Caldron lake occupying the northeast corner of section 32, and Heatley lake, occupying a large part of sections 22 and 27, are both fresh-water lakes surrounded by high reeds and willows. The latter has an outlet into Woody river. The land in this township is practically all flooded to a depth of from one to three feet in the wet season. There are no water-powers. The climate is suitable for growing all kinds of grain and vegetables. There is no indication of summer frosts. In the southern part of the township there is some small poplar from four to six inches in diameter which will be useful as fuel; but in the remainder of the township there is very little fuel available. No stone-quarries nor indications of minerals were seen. Moose, jumping deer and elks are often seen and weasels, muskrats, foxes, coyotes and martens are trapped by the Indians. Rabbits and partridges abound in the autumn and winter. Whitefish, jackfish and pickerel are found in abundance in Swan lake and a few fish may be obtained from the rivers.

J. E. Jackson, D.L.S., 1913.

It is very difficult to reach the township with a team and wagon in summer.

**41.** There is a winter road leading from Fishtown, south of Novra, a station on the Canadian Northern railway, across the northern part of this township, but it is so wet that it cannot be used in summer. The Pelly trail may be followed from Bowsman as far as section 34, township 39, range 24, and thence northerly through sections 3, 10 and 15, township 40, range 24, as far as Dolane creek. From this point any supplies must be taken by boat down Dolane creek to Heatley lake, thence down the Woody river to section 4, township 41, range 24, thence across a portage to Birch river, down this river to the Wawayanagon river and thence up this stream to about the centre of section 8, township 41, range 24. A road was made from this point in a northwesterly direction across sections 18, 19, 30 and 31 to the Fish-town trail in section 31. A team can manage to take an empty wagon across sections 15, 22, 27 and 34, township 40, range 24, and section 3, township 41, range 24, to the Woody river in the driest season of the year. It is necessary to take the wagons across the Woody and Birch rivers and up the Wawayanagon river to the centre of section 8, in boats. The horses have to swim across the rivers and then they can be taken across country by themselves, but considerable care must be exercised in order to get them safely across the sloughs even in dry weather. The soil is chiefly black loam to a depth of from six to eight inches with a clay subsoil. The eastern part of the township, next to the Indian reserve, is flat and too wet for growing crops at present, but would be good land if it were drained. This area is so near the level of Swan lake that it could not be drained without lowering the outlet of Swan lake. If Shoal river, which flows from Swan lake to lake Winnipegosis, were dredged to a depth of six or eight feet this township could be easily drained and it then would be all good land for farming. There is a strip of dry land about one and a half miles wide along the west and north of the township which is slightly rolling and covered with spruce, poplar and balsam from six to twelve inches in diameter. This is all good timber, but not of sufficient size to warrant its being set aside as a timber berth. However, there is sufficient to supply the settlers for building purposes and fuel for a considerable time. The remainder of the township is low, flat land and has very little timber, being covered principally with willows and low scrub. There is very little hay. The portion of the township where there is no timber is nearly all covered with willows, and where there are no willows it is too wet to make hay. The easterly half of the township is occupied by Swan lake, which contains fresh water from five to eight feet deep. Birch river flows through section 5 and across the Indian reserve to Swan lake. It is a good fresh-water river about sixty feet wide and eight feet deep and has very little current except at time of flood. Woody river flows across section 4 and across the Indian reserve to Swan lake. It is a fresh-water river about one chain wide and ten feet deep, and also has very little current except at time of flood. Wawayanagon river is a branch of Birch river. It is a very crooked stream flowing through sections 7, 17, 8 and 5 into Birch river in section 4. It is about five feet wide at its upper end, gradually widening to about fifty feet where it enters Birch river. It is from three to five feet deep, and has a clay bottom. The current is very slight, being only about

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one-quarter mile per hour. There is another creek from ten to twenty feet wide and about three feet deep flowing into Swan lake through sections 30, 29, 20, 28 and 21. This is also a fresh-water stream with a sandy bottom and a slow current. All the creeks and rivers run during the whole of the year. The land for a distance of about one and a half miles from Swan lake and along the rivers for about one-half mile on either side of each is flooded to a depth of from one to three feet in the wet seasons. No water-power can be developed. The climate is suitable for the growing of all sorts of grain and vegetables. There are rarely any summer frosts. The only fuel is timber, which is sufficient to last the settlers for a number of years. No stone-quarries nor indications of minerals were found. Moose, jumping deer and elks are often seen, and weasels, muskrats, foxes, coyotes and martens are trapped by the Indians. Rabbits and partridges abound in the autumn and winter. Jackfish, goldeyes and a few whitefish are found in Birch river. Jackfish, whitefish and pickerel are found in large quantities in Swan lake. —J.E. Jackson, D.L.S., 1913.

(*North outline.*)—The country in this range consists of swamp and muskeg

**56.** land, small lakes and sluggish streams occurring at intervals. A growth of willow generally covers the surface with small spruce and tamarack along some of the creeks. In ordinary seasons hay could be cut around some of the marshes. In section 36 there is a ridge from half a mile to one mile in width, timbered with spruce, tamarack, poplar, birch and jackpine averaging eight inches in diameter. This ridge has a general northwesterly and southeasterly direction, and the timber is sound and would make good milling timber.—E. W. Robinson, D.L.S., 1911.

This township is reached by the Hudson Bay railway, which runs through

**57.** sections 31 and 32. The soil is gravelly and unfit for anything. The surface is undulating and is mostly open marsh. Very little timber is found and most of it is even unsuitable for fuel. Spruce, jackpine, poplar and tamarack are found, but the average size would be less than four inches. Some useless hay is found on the marsh land. Water is very plentiful in the swamps and marshes, the latter being so soft and wet as to be impassable in summer. No water-powers exist. The water of this township is unfit for domestic use. The climate, in general, is similar to that of northern Manitoba. No summer frosts were noticed. No signs of coal, oil or natural gas were noticed. No stone-quarries are in evidence, and no traces of economic mineral were seen.—P. B. Street, D.L.S., 1913.

This township is reached by the Hudson Bay railway, which runs through

**58.** the southeastern portion of the township. It may also be reached by a winter trail across Atikameg lake. The soil is very poor and of little use for agriculture. The surface is either wooded or open marsh land. The marsh lands in the southeastern corner are part of the large marsh area which extends from Cormorant lake to the Saskatchewan river. Generally, the trees are very small and useless, but some fairly large spruce and tamarack were found in the eastern half of the township. However, no timber of value for lumber exists in the township. There is no hay. Atikameg lake, which occupies about three-fourths of this township, contains the finest drinking water in the neighbourhood. It has fine sandy beaches and is very deep and clear. Water can be found in any part of the southeastern portion of the township. No water-powers exist. The climate is good, and no summer frosts occur. Jackpine, birch and tamarack which grow up to eight inches in diameter, will supply fuel to the locality for many years to come. No stone-quarries were noticed. Good limestone rock appears to be plentiful in section 5 and might be burnt for lime. Game is scarce, ducks, geese, partridges and rabbits being the only varieties noticed in this vicinity.—P. B. Street, D.L.S., 1913.

(*North outline, ranges 24 and 25.*)—These ranges are covered with spruce and

**60.** tamarack with frequent jackpine ridges. Small lakes are numerous. For information as to climate and game, see the report on tp. 60-14-Pr.—O. Rolfson, D.L.S., 1913.

The easiest route to this township is by leaving the Hudson Bay railway in

**61.** township 60, range 21, and thence across Cormorant lake. There is also a fairly good winter road from Pas to this lake. Nearly all of the easterly two-thirds of the township is occupied by Cormorant lake while the remainder is covered with a growth of scrub jackpine and poplar with small spruce and tamarack. Through-

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out the southerly four miles there is usually limestone close to the surface. In sections 26 and 27 some good spruce, poplar and a few birch are found. The soil is generally fourth-class and is best suited for the growing of timber. No hay can be cut. Cormorant lake contains very fine water. No water-power can be developed. Summer frosts are liable to occur, but they are not severe enough to do serious damage. Some very fine vegetables were grown in section 27 where the soil is somewhat better than usual. No land is liable to flooding. Wood for fuel is plentiful, but no coal nor lignite was found. There are large quantities of limestone in the westerly third of the township, but no other rock was seen. This limestone is too soft for building purposes, but might be used in the manufacture of lime. The game consists of moose, caribou, foxes, coyotes and timber wolves. Jackfish, whitefish, pickerel and trout are found in Cormorant lake.—*J. S. Galletly, D.L.S., 1914.*

## RANGE 25.

This township, being on Duck mountain, is very rough and hilly with a gradual

- 35.** rise to the south. The whole surface is covered with thick, large, dead poplar, spruce and a heavy growth of alder and willow. The fallen timber is so thick in places that one can walk for miles on it without touching the ground. There are a few strips of green spruce which would be suitable for building purposes. The soil throughout is light consisting of an inch or two of loam with a red sand and gravel subsoil. The township is well supplied with water by the east branch of Favel and the North Duck rivers. This latter stream is about twenty to thirty links wide, eighteen inches to two feet deep, has high cut banks and takes its rise in the numerous muskegs. The colonization road from Dauphin to Swan River runs westerly across the northern part of the township. A few sections in the northwest portion are fairly open, level and suitable for homesteading. Two squatters have settled in this part.—*E. W. Hubbell, D.L.S., 1899.*

The route followed is due south from Minitonas on the road allowance to the northwest corner of section 6. It was a rather bad road as it was not graded and was very boggy in some places. The soil on the north side of section 6 is very wet, being chiefly muskeg, but to the south side of this section and also sections 5 and 4 the soil is good for farming. Section 6 is timbered with spruce from ten to twenty inches in diameter and some poplar and birch of fair size. Sections 4 and 5 are chiefly scrubby with considerable windfall and are broken up by deep ravines. The timber on section 6 does not extend to the south or east sides except an occasional tree. Hay is very scarce, but some could be obtained if the brush were cleared out of the sloughs in sections 5 and 4. Water is very plentiful and fresh. Numerous small streams are found. The land is well drained in most places, except the muskeg to the north of section 6. There are no water-powers. The climate (in July) was mild and damp, there being considerable rain. No summer frosts were noticed. Wood is the only kind of fuel but there is plenty of it and it can be had almost anywhere. No stone-quarries nor minerals were found and no game was seen, but traces of moose and deer were noticed. The timber in section 6 is in a timber limit.—*W. G. McFarlane, D.L.S., 1906.*

- 36.** In the western half of this township there are about seven sections of very desirable land for farming purposes. The soil is either clay or sandy loam of very rich quality and is well watered by several small creeks in which water may be obtained at all times of the year from beaver dams. Good timber for fuel or building purposes may be obtained in large quantities on Duck mountain which lies in the immediate vicinity.—*P. R. A. Belanger, D.L.S., 1897.*

- 37.** The southern row of sections in this township is not very heavily timbered although there is sufficient for settlers' use. The rest of the southern half is very heavily timbered. The whole area is very low and wet but might easily be drained into the Sinclair river and its numerous tributaries. An abundance of hay is to be found in the numerous sloughs. The soil is of very good quality so that when cleared and drained this locality will make first-class farming country.—*C. F. Aylsworth, D.L.S., 1899.*

The northern portion of this township is covered with poplar bush interspersed with hay meadows. The soil is a good black loam with a clay subsoil. The Swan and

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Roaring rivers run through the northwest portion. Settlers will find good poplar and some scattered spruce which is suitable for building purposes.—*J. L. Reid, D.L.S., 1900.*

The trail from Swan lake to Fort Pelly passes directly through this township,  
**38.** but is in very bad condition southwest of the south boundary. Eventually another route will be found from some point on the Canadian Northern railway nearer than Swan River station. The soil is generally clay with an alluvial deposit of black or clay loam of varying depths and is well adapted to all kinds of farming. This township is timbered throughout. Near Swan river the timber is principally poplar, cottonwood and some spruce, all of large size. More or less large timber, poplar chiefly, is scattered throughout the township. In the northwesterly portions the greater part of the timber is small poplar. Many people have asked for a description of it, intending to erect sawmills. With the exception of that in and around the sloughs, hay is very scarce. Swan river flows from south to north through the township and there are also numerous brooks from a few links to twenty feet in width. These waters are all slightly alkaline, but not to any appreciable extent. At the time of survey the water in Swan river was very low, the current strong and the water shallow. On account of the height of the banks there is no great danger of flooding any large area. Power could be developed on Swan river. Frosts were experienced several times during the summer, but there is no doubt that with the clearing of the land and the drainage of the country they will discontinue. Wood is abundant and is the only fuel available. No stone-quarries nor minerals exist. There are large numbers of moose, bears and partridges.—*H. B. Proudfoot, D.L.S., 1904.*

The cart trail between Fort Pelly and Swan lake passes through the south-easterly portion of this township, crossing the Prince Albert branch of the Canadian Northern railway near Swan River station. This trail south of the township is in a very poor condition for travelling. Another trail leaves the above railway about one mile south of Birch River station, and runs into the northwesterly portion of the township. This road is in fairly good condition. The soil is suitable for general agricultural pursuits but is very variable in character changing from black and clay loam to sandy loam with a subsoil varying from sand to clay. There is a small area of prairie in sections 19 and 30; the remainder of the township is timbered principally with small poplar, but along the numerous streams large poplar, cottonwood, spruce, tamarack and some maple, elm and ash occur. Hay can be cut around most of the sloughs and grass swamps and at places in the willow swamps. No large hay marshes were discovered. The township is very well watered with numerous streams, principally the Swan, Woody and Birch rivers all of which have strong currents and contain fresh water, and are in well defined valleys. No water-power is available without extensive artificial works. This district is subject to summer frosts. The fall of 1904 was very mild and fine, with no wet weather. Wood is the only fuel, and it is abundant. No minerals or rock exposures were noticed. Moose, bears, beavers, chickens and partridges are found.—*H. B. Proudfoot, D.L.S., 1904.*

This township lies east of the Canadian Northern railway, between Birch River and Novra stations. An old trail, in fairly good condition, leaves the railway about one mile south of Birch River station and passes through township 39, range 25, about one and a half miles south of the south boundary of township 40, range 25. From this trail a road was cut running northeasterly crossing the south boundary near the southwest corner of section 5 and terminating about the centre of the northeast quarter of section 22. The soil is principally clay, with an alluvial deposit of black and clay loam of a few inches in depth. With the clearing of the country and the drainage of the land, thereby lessening the liability to summer frosts, this section will be well adapted to mixed farming. The surface is undulating and timbered throughout with poplar, cottonwood, spruce, birch and tamarack and very thick underbrush. The first four varieties of timber mentioned occur principally in the northwesterly portion of the township, while the large swamps in the easterly part are almost wholly timbered with spruce and tamarack. All the different kinds of timber are well distributed as to size, running from a few inches up to thirty inches in diameter. The path of a cyclone, which passed over this country a few years ago, is clearly marked across sections 3, 4, 5, 6, 7 and 8, leaving a bad windfall about half a mile in width. There are a few small hay meadows scattered throughout the township but no large marshes. Numerous small brooks were noticed, the largest flowing almost due east along

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the chord between sections 19 and 30. The water in these brooks is only slightly alkaline, hardly perceptible to the taste. No water-powers exist. Frosts occurred several times during the month of September, and at this writing (October 3) snow is falling. Wood for fuel is abundant. There are no stone-quarries nor minerals. Large numbers of moose and bears are found. Partridges are very plentiful.—*H. B. Proudfoot, D.L.S., 1904.*

**41.** The soil in the southwest corner is good and suitable for farming but the greater part of the rest is muskeg or swamp which is very wet and is of very little use. The surface is level and covered with thick woods, but the only timber of any value is at the southwest corner. It is chiefly poplar and spruce from eight to sixteen inches in diameter. Spruce, tamarack and willow are found in the muskegs, and some balsam and birch were also seen. Hay is very scarce. Only small streams are found, but the water in these is fresh and the supply permanent. The land is flooded to a great extent now (May), the water being a foot or more deep. There are no water-powers. Cold cloudy weather with alternate snow, sleet and rain storms occurred in the latter half of May with as much as five feet of snow in places on the hills, while two feet was common on the level in the big timber. Frosts were experienced. Wood is the only fuel, but it is plentiful almost everywhere. No coal, stone-quarries nor minerals were found. Moose was the only game seen, but they are plentiful.—*W. G. McFarlane, D.L.S., 1907.*

It is very difficult to reach this township with a team and wagon in the summer. The western part of the township is so wet and soft that it is impossible to get a team across in the summer from the railroad which passes just to the west. There is a winter road leading from Fishtown, south of Novra, a station on the Canadian Northern railway, across the northern part of the township, but it is too wet to use in the summer. The route for getting into the township with horses was to follow the Pelly trail from Bowsman, on the Canadian Northern railway, in township 38, range 27, across townships 38 and 39, ranges 26 and 25, and township 39, range 24, as far as section 34, thence following a trail north into township 40, range 24, across sections 3, 10 and 15 to Dolane creek. From this point all supplies had to be taken in boats down Dolane creek to Heatley lake, across this lake and down Woody river into section 4, township 41, range 24. A portage is then made between Woody and Birch rivers, which is followed down stream to Wawayanagon river, and thence up this stream to about the centre of section 8, township 41, range 24. From here a wagon road was made in a northwesterly direction across sections 18, 19, 30 and 31, to the Fishtown trail, in section 31. This trail may be followed westerly across sections 36, 25 and 26, township 41, range 25. A team can manage to take an empty wagon across sections 15, 22, 27 and 34, township 40, range 24 and section 3, township 41, range 24, to the Woody river in the driest season of the year. It is necessary to take the wagons across Woody and Birch rivers and up the Wawayanagon river to the centre of section 8 in boats. The horses have to swim across these rivers and they can be taken across country by themselves, but considerable care must be exercised in order to get them safely across the sloughs even in dry weather. About one-half of sections 1, 12, 13, 24, 25, 27, 34 and 33 is rolling land covered with poplar and spruce. This area has a black loam soil about six inches in depth with a clay subsoil and is good land. Practically all the remainder of the township is a wet, mossy swamp covered with spruce and tamarack from five to ten inches in diameter. It would all be good land if drained, but at present it is too wet to be of much use as farm land. The eastern parts of the above-mentioned sections, about half of each, is slightly rolling country and covered with poplar and spruce from ten to fifteen inches in diameter. The remainder of the township is level, swampy land, covered with spruce and tamarack from five to ten inches in diameter and is very wet. In sections 3, 12, 13, 24, 25, 27 and 33 there is some good spruce and poplar from ten to fifteen inches in diameter. Practically all of the remainder of the township is covered with spruce and tamarack from six to ten inches in diameter. T. B. No. 1101, Block No. 4, occupies sections 33 and 34 and parts of sections 35, 27, 28 and 32. The timber in the remainder of the township is not of sufficient size to warrant its being laid out as timber berths. There is no hay. A creek of fresh water flows through sections 27, 26 and 25 and across township 41, range 24, to Swan lake. It is about seven feet wide, one foot deep and flows at the rate of about three-quarters of a mile per hour. There are a number of small creeks of fresh water from two to three feet wide and about one foot deep, flowing towards Swan lake in sections 1, 2, 12, 13, 14, 15, 22, 27, 28, 29 and 32. There are no lakes, the only other water being found in the muskegs. All the low-lying land

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is flooded in the wet seasons to a depth of from one to three feet. There are no water-powers. The climate is suitable for growing all kinds of grain and vegetables. No indications of summer frosts were seen. There is sufficient wood in all parts of the township to supply the settlers with fuel for a considerable time. No stone-quarries nor minerals were found. Moose, jumping deer and elks are often seen and weasels, muskrats, foxes, coyotes and martens are trapped by the Indians. Rabbits and partridges abound in the autumn and winter.—*J. E. Jackson, D.L.S., 1913.*

(Sections 25 to 36.)—These sections are for the most part spruce and tamarack swamp and are of no value for agriculture. A winter trail, locally known as the “Fish haul trail” runs from Mafeking, a station on the Canadian Northern railway, to Dawson bay, passing through sections 26, 27, 35 and 36 of this township. In summer this trail is too wet to be used.—*R. J. Jephson, D.L.S., 1913.*

A good winter trail which runs from Mafeking, a station on the Canadian Northern railway, to Dawson bay passes through the southeast corner of this township. This trail is impassable for horses in the summer. The north-easterly portion of the township is fairly dry and rolling, and is broken by tamarack and spruce swamps. There is very little top-soil and the land is not suitable for agriculture. The easterly part of the township is underlain by limestone, being flat rock in some places and boulders in others. This formation extends southwesterly through the township. A creek containing salt water flows southeasterly through section 24, and many salt springs were found in the westerly portions of sections 13 and 24. Steeprock river, a swift and shallow stream, enters the township in section 5 and flows into Dawson bay in section 13.—*R. J. Jephson, D.L.S., 1913.*

(North outline).—The country in this range consists of swamps and muskeg land, small lakes and suggish streams occurring at intervals. A growth of willow generally covers the surface, with small spruce and tamarack along some of the creeks. In ordinary seasons hay can be cut around some of the marshes.—*E. W. Robinson, D.L.S., 1911.*

(Subdivision).—This township may be reached from the village of Pas in half an hour by taking a canoe along the Saskatchewan river. The soil in general is a light clay, and the surface is practically level. Poplar up to ten inches in diameter and thick red willow grow along the banks of the Saskatchewan river. There is an abundant supply of hay between the main Saskatchewan river and its small creeks or indentations. The water is fresh and permanent. The main small creek is navigable during high-water for vessels with a draught up to three feet; it has a current of two and a half miles per hour, and during the high-water season the creek rises to within three feet of the top of its banks. There are no available water-powers in the township. The climate during summer and autumn is temperate with a great deal of sunshine as a rule. The past summer was, however, an exception, heavy rains having been experienced in July and August. Poplar as fuel borders the streams. There are no coal nor lignite veins, nor stone-quarries nor minerals of any account. Several lakes in this township are literally swarming with ducks and geese during the fall of the year, but the latter stay for a short time only.—*A. L. McLennan, D.L.S., 1911.*

This township may be reached by the Hudson Bay railway which traverses it in a northeasterly direction from section 7 to section 36. The sections on the northwesterly side of the railway consist of rolling country with some stretches of marsh and muskeg. They are heavily timbered. As no mounding was possible there was no opportunity to examine the soil at any depth. Judging from the flora, it is probable that it would be suitable for mixed farming if cleared. The sections on the southeasterly side of the railway are willow swamp. The soil is a rich black muck, and would undoubtedly prove very fertile if drained. The quarter-sections adjoining the creek running through sections 12, 13, 14, 11, 2, 3 and 4 are drier than the rest of this swamp and are covered with poplar and willow. The small lakes traversed are shallow and muddy. In the timbered portion are found trees of the following varieties and dimensions: spruce up to twenty-four inches, jackpine and tamarack up to twelve inches and poplar and birch up to ten inches in diameter. There is a fairly large supply of spruce suitable for milling, especially in sections 26, 27, 28, 34, 35 and 36. There is no hay land. The water in the smaller lakes is fresh, but rather turbid. There are no water-powers. The climate resembles that of older Manitoba. No summer frosts are reported. Timber is the only fuel available. There are limestone cuts on

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the railway in sections 26, 25 and 18. The stone is of fair quality for building or burning, and quarries might be developed. The cuts are six feet deep and there is probably a considerable quantity of rock below the level of the railway grade. No minerals were observed. Rabbits, ptarmigans, ducks, partridges and prairie-chickens are plentiful. There are also some moose and jumping deer.—*E. W. Berry, D.L.S., 1912.*

(South two-thirds.)—This township can be reached in winter by the sleigh trail from Pas to Atikameg lake. In summer it is possible to get into Atikameg lake through Moose lake and Cormorant lake, a rather circuitous route used by fishermen. The Hudson Bay railway will soon make this township readily accessible. There was no opportunity to examine the soil at any depth as no mounding could be done. Judging from the flora, it is probably rather sandy and stony in places, though some of it would give no doubt a fair yield if used for mixed farming when cleared. The surface is rolling. The land is all dry, rising twenty to forty feet above Atikameg lake, and is all heavily timbered. The varieties and sizes of timber are as follows: spruce up to twenty-four inches, jackpine up to ten inches, poplar up to twelve inches and birch up to ten inches in diameter. There is no hay land. The water of Atikameg lake is fresh and clear. Water could no doubt be obtained anywhere by sinking wells about thirty feet. There are no water-powers. The climate resembles that of older Manitoba. There is an abundant supply of wood for fuel. No coal nor lignite veins were observed, and there are no stone-quarries nor minerals. The game consists of moose, caribou, jumping deer, rabbits, partridges, prairie-chickens, ducks and ptarmigans. Atikameg lake produces about forty tons of trout and whitefish annually.—*E. W. Berry, D.L.S., 1912.*

## RANGE 26.

The northwestern part of this township may be described as a rolling burnt country partly over-grown with scrub and interspersed with bluffs of young poplar in the south part. Minitonas hill, a prominence rising to about 150 feet above the plain on the north side, lies across sections 20, 21, 27, 28 and 34. The land south of this hill is generally of the best quality especially along the west boundary. This district is well watered by Minitonas creek which rises in Duck mountain and runs through sections 16, 17, 18, 19, 30, 31 and 32. Another small creek waters sections 21 and 22 and empties into Favel river. A large bluff of spruce appears to extend over sections 3, 4 and 5, but as these sections were not surveyed the quality of the timber was not ascertained.—*P. R. A. Belanger, D.L.S., 1897.*

The route to reach this township from Pine river follows along the ridge on the old colonization road around the east side of Duck mountain. It had been many years since this road was used, and in the meantime dry logs about fifteen inches in diameter had fallen across it in great numbers, necessitating a great deal of chopping to clear it again. Besides this there were a great many soft holes, and some of the old bridges were so rotten on the top that they had to be rebuilt before we could cross them. The latter part of the road runs due south on the road allowance to the sawmill on section 1; thence by a very soft log road into section 2. The soil is usually very good, being a black loam with a clay subsoil. Towards the west and north of the part surveyed, and also along the south side, it would make first-class farm land, although a little heavily timbered at present. Through the centre of this part there are some muskegs and swamps, but in a dry year this would likely become fairly solid, and at any rate could be comparatively easily drained into Favel river or Minitonas creeks, both of which have a very good fall. When drained this may make good farm land. Hay is very plentiful in sections 10, 11, 12 and some in 2 and 3. It is rather scarce towards the west side of the township, but the greater part of what is found is of very fair quality. The water is all fresh and very abundant, especially in the easterly part, and the supply is quite sufficient and permanent. Favel river is about twenty feet wide and one foot deep, and has a current of three or four miles per hour. Minitonas creek is scarcely as large. Some of the sections, such as parts of 11, 12, 1 and 2, may be flooded at times, in fact beavers are flooding some of them now to a depth of about one foot. No water-powers of any great value can be obtained, but Favel river might be used for a small one, as its banks are steep at the south boundary of section 1. The climate was mild and warm, but there was considerable rain. Some days were very hot. No summer frosts were experienced during July. Wood is the only fuel, which is plentiful in all parts of the township. No stone-quarries nor minerals were

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found. No game was seen except rabbits, though moose and deer tracks were discovered; there were also indications of beavers being in the locality. The timber of value is chiefly confined to sections 1, 2 and 3, and is now a timber limit. It consists chiefly of spruce from ten to twenty inches in diameter and some birch, balsam and poplar about ten to twelve inches in diameter. There is also some timber on the westerly part which will be good for settlers' uses.—*W. G. McFarlane, D.L.S., 1906.*

The part subdivided in this township comprises all the land situated north of  
**36.** Roaring river. This is all the open country in the township; the remainder is heavily timbered, wet and broken by numerous hay swamps and was found unfit for immediate settlement. The surveyed portion has a rich soil and is well adapted to farming purposes. It is well watered by numerous rivers and creeks among which are Roaring river, Favel river and its east branch and Minitonas creek. Bluffs of fine large spruce are found in the valleys of the streams on sections 18, 23, 26 and 30. There are large hay meadows in the northern part and an abundance of firewood may be obtained on Duck mountain.—*P. R. A. Belanger, D.L.S., 1897.*

The northwest corner of this township is covered with large poplar and considerable spruce of fair size. A sawmill has been erected in section 30. The country is level and the soil is of first-class quality. Numerous muskegs are scattered throughout. The largest stream is the Roaring river.—*E. W. Hubbell, D.L.S., 1898.*

That portion of the township lying south of Swan river is covered with a heavy  
**37.** poplar brush in which there are some scattered areas that could easily be cleared. That portion north of the river is traversed by the Fort Pelly and Swan river trail and is covered with a very dense growth of poplar brush and scrub of poplar and willow interspersed with large hay marshes and muskegs. The soil everywhere is of first-class quality and when cleared and drained should make very good farming country. Considerable difficulty was experienced in obtaining good water, especially in sections 22 and 27 but no complaints were heard from the settlers in sections 18 and 20.—*C. F. Aylsworth, D.L.S., 1899.*

The soil in the southern two-thirds of this township is of first-class quality  
**38.** but a great deal of this area is low and wet containing numerous large muskegs and sloughs. The only land that is at present suitable for settlement is that adjoining Woody river, which crosses the township in a northeasterly direction. There is a considerable quantity of good spruce which will be useful for building purposes.—*C. F. Aylsworth, D.L.S., 1899.*

A wagon road from Bowsman station on the Prince Albert branch of the Canadian Northern railway, passes along the west boundaries of sections 30 and 31. This road is not in good condition. The soil is principally sand with an alluvial deposit of black or sandy loam of varying thickness, and is good light agricultural land. The surface of that part of the township which was surveyed is timbered mostly with small poplar. There is a little fair-sized poplar near the railway, but it is not of any extent. Hay can be cut around most of the sloughs and grass swamps, but there are no large hay areas. Woody river runs through this township, and several small streams empty into it, in all of which the water is fresh and good. No bad or alkaline water was found. There is no water-power. Until the land is cleared and drained summer frosts will be very prevalent. The fall of 1904 was very open and free from storms. Wood is the only fuel available. No minerals nor exposed rock exist. Moose, bears, beavers, otters, martens, lynxes, prairie-chickens and partridges are found in the township.—*H. B. Proudfoot, D.L.S., 1904.*

Birch River station, on the Canadian Northern railway, Prince Albert branch,  
**39.** is situated on section 35 of the township, and by rail to that point is the best means of reaching the northerly part. There is also a road from Bowsman station, on the same railway, to section 36, township 38, range 27 west, and from which place old railway tote roads lead to various parts of the southerly portion of the township. As a rule the soil is poor and very light, being sand in most parts, with a slight alluvial deposit. With the exception of a small area of prairie in section 24, this township is all timbered. Most of the timber east of the railway and in some parts of the westerly portion is small poplar with a few swamps of tamarack and spruce, while in the northwesterly portion there is some large poplar and cottonwood, a few ridges covered with jackpine and several large areas of windfalls. There are no large

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hay marshes, but a few small swamps afford a limited supply of fair hay. Good fresh water is found in the numerous brooks, but still water is scarce except in the spruce and tamarack swamps. Sloughs are not numerous. There is no water-power. Fine weather was experienced during the whole of the time of survey, but frosts are frequent in summer. There is an abundance of wood for fuel. There are no minerals and no rock exposures. There are bears, moose, elks, prairie-chickens and partridges, while indications of beavers were seen on Jackfish brook. The Prince Albert branch of the Canadian Northern railway crosses the township from south to north.—*H. B. Proudfoot, D.L.S., 1904.*

The Prince Albert branch of the Canadian Northern railway passes through  
**40.** the easterly part of this township from south to north. Birch River station is about half a mile south of the south boundary and Novra station is about two and a half miles north of the north boundary. There are some old logging roads leading westerly from an abandoned mill site in section 14, but they are impassable in summer. The soil is sandy—in some places clay—with a fair deposit of black loam on the surface and, where not too much broken by hills and ravines, is adapted to raising all kinds of grain, although it could not be called good soil. The whole of the township is timbered. East of the railway and for about a mile to a mile and a half west of it the surface is undulating and rolling and timbered principally with poplar, balm of Gilead, birch, spruce and tamarack. Porcupine mountain cuts well into the north and west parts of the township, causing the surface to be very broken and hilly. This part is timbered principally with spruce, jackpine, poplar and birch. The best of the spruce has been cut, what is left being stunted and knotty. Part of this township was included in a timber berth at one time. There are no large hay meadows and very few sloughs or grass swamps where hay can be cut. Numerous spring brooks take their rise in the foothills of Porcupine mountain and flow easterly through the township. The water was fresh. No alkaline water was met with. The streams are not large enough to furnish water-power. Frosts were experienced in this locality during the summer, but there is no doubt that with the clearing of the land and drainage they will disappear. There is wood in abundance for fuel. There are no stone-quarries, nor minerals. The following game was seen: moose, jumping deer, a few elks, bears and small fur-bearing animals, partridges and prairie-chickens. A few years ago a tornado visited this locality and laid down a belt of timber, from one-half to one mile and a half in width, across this township from east to west and extending into ranges 25 and 27. That part will be impassable until visited by fire.—*H. B. Proudfoot, D.L.S., 1904.*

The soil is good for farming in the southerly part but is more sandy and very  
**41.** stony towards the north. There is also considerable muskeg towards the north-east. The surface is all heavily wooded with poplar and spruce to the south, some small poplar, birch and jackpine towards the north and spruce and tamarack muskeg on the east. The only timber of any value is in the southerly part or on the hills to the west. It is chiefly poplar and spruce from eighteen to twenty-four inches in diameter with some balsam and birch from six to twelve inches. There is a fair amount of it but it will be hard to get out as no waterways are available and the surface is very hilly. Some birch, balsam and alder were also found. Hay is very scarce. The water supply is very abundant and fresh, no alkali being found. The streams are small but there are quite a number of them. The land is not liable to be flooded except in the muskeg at the easterly side. There are no water-powers. Cold, cloudy weather with alternate snow, sleet and rain storms occurred in the latter half of May with as much as five feet of snow on the ground in places in the hills, while two feet was common on the level in the big timber; frosts were also experienced. Wood is the only fuel and is plentiful almost everywhere. No coal, stone-quarries nor minerals of any kind were found. The only game seen was moose. The westerly part of the township is occupied by the Porcupine hills and is very high and rough.—*W. G. McFarlane, D.L.S., 1907.*

The route followed is a trail which crosses the railway north of Novra and runs  
**42.** north along the foot of the hills. It was in general good but very stony in places. The soil at the north and south sides of the township is black loam and clay, suitable for farming and is well watered, but in the centre it is sandy on the ridges and with considerable swamp and muskeg. The surface is rolling at the south

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and north sides, hilly at the west and flat at the centre of the east side. It is almost all thickly wooded. A little brûlé is found just south of Bell river and also some at the north side of the township. The only timber of value is found on the hills to the west and across the centre of the township. It is chiefly poplar and spruce varying from eight to twenty-four inches in diameter. Jackpine, birch and poplar are found at the south and north sides and some tamarack at the east. Hay is very scarce. The water is fresh and abundant and the supply is permanent. Bell river which flows easterly across the south side of the township is a fine stream, especially in the spring when great difficulty was experienced in crossing it, as the snow was just melting on the hills to the west. It was about five feet deep and running about eight to ten miles per hour carrying down large trees and roaring like distant thunder. The only part of the township liable to be flooded is the muskeg near the centre of the east side but quite a number of streams run out of it to the railway ditches. Water-power might be developed farther to the west on Bell river but there are no rapids nor falls of any height in the part surveyed. The climate was very damp and cool. Considerable rain fell and frosts were noticed. The only fuel is wood which is plentiful almost everywhere. No coal, stone-quarries nor minerals were found. The only game seen was moose, jumping deer and bears.—W. G. McFarlane, D.L.S., 1907.

The trail runs along the foot of Porcupine mountain, west of the Canadian Northern railway. It is good in general but very soft in a few places. The soil is good for farming at the south side, being a good loam and clay subsoil but becomes sandy towards the north and is very sandy in some places along jackpine ridges. There is also some muskeg and swamp near Mafeking. The surface is rolling, timbered and scrubby, with some brûlé at the south side. Timber has been large and plentiful to the west of Mafeking and north to Steeprock river but most of it has been cut. Some poplar six to eighteen inches and spruce six to thirty inches is still found, but the timber is mostly second-growth poplar, jackpine one to twelve inches, birch, willow and alder. Some tamarack is found in the muskeg. Hay is very scarce. The water is fresh and very plentiful in creeks and Steeprock river. This river is a fine stream about one and one-half chains wide, four feet deep and has a current of four or five miles per hour. The land is not likely to be flooded. There are no water-powers. The weather was damp and cloudy with considerable rain and ice was still to be found along some creeks in the middle of June. No hard frosts were noticed. The only fuel is wood, and there is plenty of it everywhere. No coal, stone-quarries nor minerals were found. Moose and bears were seen.—W. G. McFarlane, D.L.S., 1907.

The trial runs on at some distance west of the Canadian Northern railway until close to the south boundary, where it goes along the right of way through muskeg and is very bad until within about a mile of Rice creek, where it again skirts the hills and is drier and better. The soil in the southwest portion of the township is light with muskeg and swamp near the railway but it is better towards the north and would make fair farm land. The surface is rather flat and thickly wooded. Some scattered timber is found but in no large quantities. It consists of spruce six to twenty inches, poplar two to twelve inches, birch, tamarack, willow and alder scrub with considerable jackpine to the southwest. Hay is scarce. Water is fresh and plentiful, but only small streams are found. The land is liable to be flooded several inches deep in places. There are no water-powers. The weather was damp and cloudy with some rain, but was fine and hot at times. No frosts were noticed. The only fuel is wood which is plentiful everywhere. No coal, stone-quarries nor minerals were found. No game was seen.—W. G. McFarlane, D.L.S., 1907.

The Canadian Northern railway runs through this township, and the Pasquia river also forms a means of transportation to Pas. The soil in the vicinity of the Pasquia river and Pasquia lake is alluvial clay and excellent for agriculture. Farther east it becomes very gravelly. The surface is mostly tamarack muskeg and, until drained, four-fifths of the township will always be useless. The land between the railway and Pasquia lake has quite a decided slope toward the lake, so that the muskeg or swamp might be easily drained. The timber is of little value even for fuel and consists of small spruce, tamarack, poplar and jackpine. Along the shores of the lake and river there is some excellent hay land. This area would be very valuable if it were possible to prevent the floods which render the hay unfit for use. Redtop growing as high as five or six feet is plentiful. This flooding which occurs every summer is caused by the rise of the Saskatchewan river. No water-power can be developed.

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No stone-quarries nor indications of minerals were seen. The climate is good. No summer frosts were experienced, the first occurring on September 8. Fuel in the form of wood can be had almost anywhere in the township. Bears are plentiful and moose are numerous in the country east of the railway. Small game, such as ducks, geese, prairie-chickens and partridges, is very plentiful.—P. B. Street, D.L.S., 1913.

The route for reaching this township is Pas branch of the Canadian Northern

**55.** railway, which passes through the middle of the township from south to north.

There is an old trail in Block A of I. R. No. 21 from Pas to the lots at Birch Point. At present it is not passable in summer, but with an abundance of suitable material nearby it could easily be converted into a good road. The soil of the ridge followed by the railway is gravelly and stony. In the sections east of the railway the soil is a rich black loam covered with about a foot of moss. This should prove very productive for general farming purposes if drained. Most of the land west of the ridge is flooded and forms part of Pasquia lake. The ridge provides excellent gravel for road-making, etc. The ridge along the railway is timbered with birch, spruce, poplar and jackpine up to eight inches in diameter. East of this the timber is stunted spruce and tamarack. There is some good hay land in sections 33, 28 and 27. The water of Pasquia lake is fresh and the supply abundant. Water can be obtained anywhere in the township by sinking a well a few feet. There are no water-powers. The climate is much the same as in the more southerly parts of Manitoba, and no summer frosts were noticed last season. There is plenty of wood for fuel. No coal deposits were seen. There is a gravel pit, opened by the Canadian Northern railway, in sections 14, 15 and 22 which supplies the town of Pas with gravel for streets, etc., but there are no stone-quarries nor minerals. The following kinds of game are to be found: moose, caribou, jumping deer, ducks, partridges, prairie-chickens and ptarmigans. All varieties of birds and water-fowl are very plentiful. The Pasquia river in this township is merely a deep channel in the swamp and lake. It has no definite bank.—E. W. Berry, D.L.S., 1912.

(*Strip of land along Pasquia river.*)—The soil is of a rich alluvial character and very fertile. Owing to floods in spring and in July when

**55 & 56.** the snow water from the mountains comes down the Saskatchewan river and up the Pasquia river, there is only a narrow strip along the river suitable for general farming purposes. The land produces, however, a very fine crop of hay. The surface is hay and marsh land with some dense ridges of willow. There is no timber. Hay grows on about half the area adjoining the river and is a luxuriant crop, but much of it cannot be saved in a wet season such as the present. The water is fresh and the supply abundant. The Pasquia river is two chains wide and varies greatly in depth with the seasons. During most of the summer it is navigable for small steamers. It has an average current of three miles per hour and in July it is reversed in direction as far as Pasquia lake. Except for a strip varying from two to fifteen chains in width along the river, the whole area is liable to be flooded to a depth of six inches. There is no water-power. The climate is suitable for agriculture, and there is little trouble from summer frosts. There are no minerals nor stone-quarries. The river contains large numbers of pike, suckers, goldeyes and some whitefish.—E. W. Berry, D.L.S., 1912.

(*North outline, ranges 26 and 27.*)—In section 33, range 27, the line crosses the

**56.** Saskatchewan river, the banks of which are covered with willow, alder and white and black poplar up to fourteen inches in diameter in places. At ten chains from the left bank of the river, the line enters the south end of Reader lake, which is shallow, about six miles across and six miles long. Stretching along the east bank of this lake is a rocky ridge covered with jackpine and scattered birch, spruce and tamarack up to twelve inches in diameter. All this ridge is included in I. R. No. 21. Small patches of good land exist and some of these are being utilized by the Indians as gardens. A wagon road starting from the north bank of the Saskatchewan river, opposite Pas, runs along this ridge as far as Atikameg lake. In the winter this road is used for bringing the fish down from Atikameg lake, where they are caught in large quantities. Leaving this ridge the line enters a spruce and tamarack muskeg, crossed by a few small ridges, until in section 34, range 26, a prominent ridge about a mile in

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width is encountered covered with spruce, tamarack, jackpine and poplar up to six inches in diameter. Along this ridge is the located line of the Hudson Bay railway. To the east there is a large expanse of swamp and muskeg about twelve miles in width. Small lakes and some sluggish streams occur at intervals. A growth of willow generally covers the surface, with some small spruce and tamarack along some of the creeks.—*E. W. Robinson, D.L.S., 1911.*

The village of Pas, the present terminus of the Canadian Northern railroad from Hudson Bay junction, is situated in section 9 of this township. The soil is generally muck, covering a few inches of sand, with a clay subsoil. The surface is slightly rolling, covered with thick, stunted spruce up to three inches in diameter. The banks of the Saskatchewan river are about eight feet above the high-water level, which occurred this year about July 10. In the southwesterly corner of the township there is a large shallow lake which runs practically dry at low water. After the recession of the water the bed of the lake is covered with a rank growth of wild grass reaching six feet in height. In the southeasterly corner of the township there are a few quarter sections suitable for mixed farming. The water is fresh and there is an abundant supply. The Saskatchewan river which flows through the township is about 1,000 feet in width and the deepest place is about thirty feet in depth with a current of two miles per hour. The Pas river drains the Pas lake running in an easterly direction, and at high-water is about seventy-five feet in width, narrowing to about twenty feet at low-water. The current is sluggish and regular, and flows into the lake from Saskatchewan river at high-water. Old settlers of Pas say that a number of years ago, nearly all the land in the vicinity of Pas was flooded to a depth sufficient to allow a steamer with a draft of thirty inches to go from the Hudson Bay warehouse in a northwesterly direction towards Cumberland House. There is no water-power in the township. The summer and fall climate as a rule is temperate with a great deal of sunshine, though the past summer was an exception to this rule, heavy rains occurring in July and August. Frost occurred during the month of September, about half a mile away from the rivers. The fuel consists of the above-mentioned spruce, and is readily available anywhere in the township. There are no coal, lignite veins, stone-quarries nor minerals of economic value. There are a great many ducks in the small lakes, and many spruce and common grouse partridges. There are many indications of moose, but there are probably none in this township at present.—*A. L. McLennan, D.L.S., 1911.*

(Southwest quarter.)—The soil in these sections is a rich black loam of alluvial origin and is very deep. The surface is swamp with willows along the creeks and rivers. The portion not situated in the various settlement lots and blocks of the Indian reserve is nearly all liable to be flooded, but some good hay is produced in dry seasons. This land would undoubtedly prove very fertile if drained, but most of it lies below the flood level of the Saskatchewan river. There is no timber. The best hay land is in the western portions of sections 6 and 7 and along the Pasquia river. This river has an average width of about two chains. There are no water-powers. Summer frosts seldom occur. There is an abundant supply of cord-wood in the adjoining country. No coal, stone-quarries nor minerals are known to exist. Wild ducks are abundant in summer and ptarmigans in winter.

(Pasquia Lake.)—The portion of this lake in this township is shallow and swampy. At low-water its depth is less than two feet. At flood, a depth of about six feet is reached in the channel between the Pasquia river and the backwater of the Saskatchewan river. The lake can then be crossed by river steamers. The banks are marshy, rising gradually to the Saskatchewan, Carrot and Pasquia rivers. These rivers, with the exception of the left bank of the Saskatchewan river, flow between natural levees formed by silting in the swamp. They are fringed with willows. The lake is no doubt gradually silting and drying up. There is evidence of considerable alluvium since the original survey of the Indian reserve in 1882.

(Gordon Lake.)—The average depth of this lake is six feet. The banks are marshy, producing some hay. The line traversed is permanent open water where vegetation stops entirely. This lake is probably drying up gradually, but the change is probably imperceptible from year to year.

(Halcrow Lake.)—This lake has an average depth of three feet. The easterly bank, adjoining the townsite of Pas, is dry and well defined by a wooded ridge. The soil is stony. The rest of the shore is marshy. Along the west shore there is open water where vegetation ceases. This lake is probably slowly drying up.—*E. W. Berry, D.L.S., 1912.*

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This township can be reached by a circuitous water route from Pas up the Saskatchewan river to the 'Big Eddy,' thence up a small stream, making several portages to Reader lake. This route would be by wagon on the ridge along the Indian reserve on the left side of the Saskatchewan river. The soil is generally a muck covering with a few inches of sand over a clay subsoil. The surface is quite hilly and rolling, covered with thick scrubby spruce up to three inches in diameter, with an occasional cluster of large spruce, and a few odd Banksian pine, also some white birch. There is practically no hay in the township. The water is fresh and the supply is permanent and abundant. There are no water-powers and the land is not liable to be flooded. The summer and fall climate as a rule is temperate with a great deal of sunshine. The past summer, however, was an exception to the rule, heavy rains having occurred in July and August. The fuel consists of the above-mentioned spruce and is readily available in all parts of the township. There are no coal nor lignite veins, nor stone-quarries nor minerals. There are plenty of spruce and grouse partridges, a few moose and bears. Mr. Reader's deserted trading and missionary post is in section 27 and consists of several buildings. This post has not been in use for four or five years. The north part of this township is a low muskeg covered with muck to a depth of twelve or fourteen inches on a sandy subsoil with small limestone boulders.—A. L. McLennan, D.L.S., 1911.

There is a wagon road from Pas to the northeast corner of Watchi lake where Reader's buildings are situated. It follows the shore of Reader lake in Block E of the Indian reserve. Beyond this there is no summer trail practicable. As the survey was made in winter when mounding was impossible, there was little opportunity to examine the soil at any depth. The soil of the swamp regions is as usual a rich black loam. The easterly half of the northerly portion of township 57 is spruce and tamarack muskeg crossed by jackpine ridges. It is not suitable for settlement without drainage. The ridges furnish fuel and good building sites, but their soil is no doubt sandy. Reader lake is skirted on the north by about a mile of willow swamp. North of this is a ridge timbered with spruce, poplar and birch. The quarter-sections on this ridge in sections 31, 32, 33 and along the east boundary of Watchi lake in sections 27 and 28 are dry and would probably yield a fair return if cleared for mixed farming. The portion of township 58 surveyed, the southeast half, is spruce and tamarack muskeg crossed by some ridges of jackpine and stretches of tamarack swamp. It is unsuitable for settlement without drainage and appears to be little higher than the level of Atikameg lake. There is a fair supply of timber suitable for milling and pulp along the shores of Reader lake, Watchi lake and Atikameg lake. The varieties are spruce up to fourteen inches, birch and poplar up to twelve inches and jackpine up to ten inches in diameter. The smaller jackpine on the ridges in township 57 is in great demand for fuel at Pas. Elsewhere the timber is small spruce and tamarack. There is some hay land in sections 20, 28, 29, 30 and 31, township 57. The quantity, however, is limited as the land is mostly flooded. The water of Reader lake and Watchi lake is fresh, soft and rather turbid, and that of Atikameg lake is clear, fresh and hard from the limestone deposits on its shores. There are no water-powers. The climate differs little from that of older Manitoba. Summer frosts seldom occur. There is an abundant supply of wood for fuel, but no coal. The island traversed in Watchi lake is practically a solid mass of limestone rising about twenty-five feet above the lake. This should make a good quarry as the product could probably be brought over on shallow scows. No minerals were found. The game consists of moose, caribou, jumping deer, partridges, prairie-chickens, ducks and ptarmigans.—E. W. Berry, D.L.S., 1912.

(*North outline, ranges 26 and 27.*)—This line runs through a large amount of clay loam soil covered with spruce, poplar and birch. This was the best land seen during the season and is distant from Pas about fifty miles. For information as to climate and game, see the report on tp. 60-14-Pr.—O. Rolfsen, D.L.S., 1913.

## RANGE 27.

The northwestern portion of this township lies on the north slope of Duck mountain. Roaring river runs through the northwest corner and the township generally, seems well-watered by creeks and springs. The soil is a good sand and clay loam with a subsoil of clay, sand and gravel. The east and south portions

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of the township are well wooded with some large spruce and poplar.—*J. L. Reid, D.L.S., 1899.*

The route followed from Swan river was a settler's road in a southerly direction, keeping to the east side of Roaring river, which has a good bridge about the north boundary of section 33, township 35, range 27. The road was in good condition for the time of year. The soil, generally speaking, is very well suited to agriculture, having a depth of from two to ten inches of black clay loam with a heavy clay subsoil. The first twelve sections, however, are somewhat hilly, and in some places rather stony. The whole township, with the exception of a few acres west of Roaring river, is covered with young poplar and willow scrub, with considerable large dead standing and fallen timber, which was killed by the fire here about six years ago. The only live timber of any size is a spruce bluff of about fifty acres extent, which extends along the east boundary of section 24. In this bluff the spruce are from eight to thirty inches in diameter. There are not enough of them, however, to make it of any value as a timber limit, although some fine logs for building purposes might be obtained. There was no hay land at all, not even enough grass for the horses. We had to get hay from the nearest settlers to feed the horses. The water is fresh and there are a number of small streams which would supply enough water for the stock and house use of farmers. Roaring river, which flows through the western side of the township, is a swift-flowing stream about a chain wide and two feet deep. In spring it contains abundance of pike and mullet, and the water is fresh and good. It has no falls or rapids from which power could be developed and the fall of the stream is too gradual and the valley too wide to develop power by construction dams. There is a considerable rainfall and the climate is well adapted to grain growing, although occasionally the older settlers say they have had frosts in August which damage the crops to some extent. No coal or lignite veins exist, but there is abundance of dry dead standing timber for fuel at present, and in a few years the young poplar will be large enough to use as fuel. There is no rock of any kind that would do for stone-quarries. In some places there are a great many granite boulders and also some limestone boulders which the settlers burn to get lime for building purposes. No minerals of any kind exist in the township. Game is very plentiful, moose and jumping deer being seen almost every day by some of the men. Black and brown bears are found occasionally also. Partridges and rabbits are likewise very plentiful, but prairie-chickens were only seen occasionally.—*C. Harvey, D.L.S., 1904.*

The country in this township is partly undulating and partly rolling with a

**35.** range of hills extending easterly and westerly across the south half. Its soil is generally sandy loam with a subsoil varying from clay to sand. Fifty per cent of the land in this township is open and may be considered very suitable for farming purposes. The remainder is of inferior quality, being mostly high land heavily timbered with poplar varying from three to seven inches in diameter, or covered with a dense second-growth. Roaring river enters in section 4 and after running through the township in the shape of an "S" it crosses the north boundary on section 33. Minitonas creek encroaches on sections 24 and 25, whilst several small creeks water the interior; these are so situated that water can be obtained within a mile of every section.—*P. R. A. Belanger, D.L.S., 1897.*

This township is gently rolling prairie mostly covered with poplar bush of

**36.** which seventy per cent is fire-killed and heavily mixed with windfalls and scrub. A few narrow strips of prairie openings are found along Tamarack creek and Roaring river, two streams which run in a northeasterly direction across the township. Another strip of scrubby land is also found along the Fort Pelly—Swan Lake trail which follows along the north bank of Swan river, which river averages about 150 feet in width and is generally a rapid stream with a sandy or stony bottom. Tamarack creek is comparatively small but it appears to flow all the year round; it rises from springs in this township and from marshes in range 28. Oak creek, a small marshy coulée flowing only during high water, enters the township in section 34 and empties into Swan river. The soil throughout is rated as second-class, it being a light sandy loam with a sandy subsoil.—*P. R. A. Belanger, D.L.S., 1897.*

The surface of this township is low and flat, being very wet and almost im-

**37.** passable for traffic until the month of August. The land is nearly all covered with small poplar and willow, with numerous hay sloughs and muskegs interspersed throughout. The soil is of excellent quality being a rich black loam with a

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clay subsoil. The western portion has considerable large poplar and occasional clumps of green spruce and windfall. The Woody river, a stream about one hundred feet wide and two to eight feet deep with a current varying from two to four miles per hour under normal conditions, enters the township in sections 18 and 19 and flowing north-easterly leaves it in section 36. This river has a sandy clay bottom and banks about ten feet high. Swan river flows through section 1. Two trails from Fort Pelly to Swan lake pass through this township and a branch trail leads to the Woody River Ranch company in section 35. An Indian hay reserve cuts off portions of sections 12, 13, 24 and 25 and embraces most of the best hay in the township. This is a very desirable township for cultivation or ranching.—*E. W. Hubbell, D.L.S., 1897.*

The soil of this township is somewhat light and may be rated as second-class. The surface in the western part, is well wooded. Good water may be easily obtained. In some places the land is rather low and wet but there is, almost everywhere, a slope so that these low patches may be easily drained. On the whole this district is very suitable for mixed farming and is rapidly being taken up by homesteaders.—*C. F. Aylsworth, D.L.S., 1899.*

Porcupine mountain occupies about six sections in the northwest corner of the **38.** township. The rest of the land may be rated as first-class with the exception of patches that are cut up by swamps and gravel ridges. On the whole, it may safely be said that at least fifty per cent of each section is good land. On Porcupine hills the country is rough and broken by gravel ridges with valleys of fairly good land lying between. The northeast half of the township is heavily timbered with medium sized poplar, balm of Gilead, and small spruce and tamarack in the swamps. On Porcupine hills there is a considerable quantity of tall, large, clear spruce but it will all be required by settlers for their own use. The southeast half of the township is nearly all open scrub and nearly every quarter section is now occupied. Although there are not many large hay meadows a considerable quantity may be obtained along the creeks. Two wagon trails cross the township one running westerly through the southern tier of sections and the other running northeasterly through the centre of the township. The Canadian Northern railway runs through the southeast corner. The township is well watered by the Bowsman and Kematch rivers and numerous small creeks which flow east or southeast having their source in the Porcupine hills. All the water is good with the exception of the two creeks in section 34 which are strongly impregnated with sulphur.—*J. Dickson, D.L.S., 1900.*

The trail followed runs along the foot of Porcupine mountain and crosses the **44.** railway four times. It was fairly good but had a number of soft holes and many creeks crossing it some of which had to be bridged. The soil is of all classes. On the north side of the railway and east of the centre it is mostly muskeg, but there is some good land along the railway in the west half. The southeast corner is on the hills and in some places the soil is sandy, while in others it is very heavy clay. The surface north of the railway and for about half a mile south of it is level or gently rolling. The southeast part is very hilly and rough, being cut up by deep ravines, down one of which Rice creek flows. It is mostly timbered east of the centre. The west part along the Canadian Northern railway has about a section of prairie, and the rest is chiefly scrubby land with considerable windfall to the northeast. The timber is chiefly six to ten-inch tamarack and spruce to the north of the railway, but some six to eight-inch poplar and balsam and a few birch are found. On the south side of the railway there is some jackpine to the east and some six to sixteen-inch spruce and poplar along the face of the hills up to Rice creek. A few eight to ten-inch birch were also found. Hay is very scarce. All the water is fresh and very plentiful in creeks and muskegs. Rice creek is a fine stream about one chain wide and from one to two feet deep at low water. The current is about four or five miles per hour. The land to the northeast is liable to be flooded several inches deep in wet seasons. Rice creek is quite rapid up in the hills where small water-powers might be developed by the aid of dams. The climate was fine and hot with some rain. No frosts were noticed. The only fuel is wood but it is very plentiful everywhere. No coal, stone-quarries nor minerals were found. Moose and bears were the only game seen.—*W. G. McFarlane, D.L.S., 1907.*

A branch of the Canadian Northern railway runs through the northwest quarter **53.** of this township, affording transportation to intending settlers. A station called Westray is situated in section 20. The Pasquia river also runs through the northwest quarter and affords communication by water with Pas. The soil in the

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vicinity of the river is an excellent alluvial clay loam. East of the river the soil gets stonier until the railway line is reached where a gravel ridge is encountered. This gravel ridge is a mile or so wide and extends a considerable distance to the northeast and to the southwest. The country east of this ridge slopes to the east and the soil is buried under a deep layer of moss which makes it difficult to say anything of its nature. The surface is undulating and practically covered throughout with timber or scrub. Spruce, jackpine and poplar are the main varieties. No timber of any value as lumber or for ties was seen, but several patches suitable for cord-wood may be found here and there. A small amount of hay may be procured along Doyle creek which flows from Davis lake into the Pasquia river. Water is plentiful everywhere and is the curse of the country. It is impossible to go anywhere in the summer without getting soaked to the waist. No water-powers exist. No stone-quarries, nor any trace of mineral deposits were found. The climate is well adapted to general farming, there being no summer frosts. Game was not very plentiful, only a few ducks and geese, and some black bears being noticed.—*P. B. Street, D.L.S., 1913.*

**54.** A branch line of the Canadian Northern railway affords a ready means of access to this township. It may also be reached by river from the near-by town of Pas. The soil is excellent in the vicinity of Pasquia river and Pasquia lake, being an alluvial clay loam. The township is largely taken up by Pasquia lake. The remainder is occupied partly by tamarack swamp and partly by a gravel ridge. No timber of any value was found, the average size being about four inches. Some good cord-wood may be found on the jackpine ridges. The timber is spruce, jackpine and poplar. Some splendid hay lands occur along the river and lake. The hay is redtop and grows four or five feet high. At present it is rendered useless by the overflowing of the Pasquia river and Pasquia lake. The water everywhere, except that on the gravel ridges, is unfit to drink. No water-powers exist. No stone-quarries nor mineral deposits were found. The climate generally is good, and no summer frosts occur. No large game is found, but geese, ducks, prairie-chickens, partridges and rabbits are very plentiful. When the Saskatchewan river is lowered and the water is prevented from backing up the Pasquia river and flooding the country as it now does annually, some very good land will be available along the Pasquia river and along Pasquia lake. *P. B. Street, D.L.S., 1913.*

**56.** (*North outline.*)—(See report for tp. 56-26-Pr.)—*E. W. Robinson, D.L.S. 1911.*

(*Subdivision.*)—This township is about four miles from Pas, and as it is traversed by three navigable streams, the Carrot, Birch and Saskatchewan rivers, it is easily accessible by boat. Except for the narrow strip of poplar and willow along the Carrot and Saskatchewan rivers, and a growth of poplar and willow along the high land in section 31 and in the Indian reserve on Fisher island, this township is wholly open, the surface at present being either hay land or marsh. The hay is found almost entirely between the Saskatchewan and Carrot rivers. Where there is no marsh the soil is clay, brought down and deposited by the rivers during periods of flood. It is of first-class quality and is capable of growing anything that can be raised in this locality. At present the soil is usually covered with a thick growth of hay. This hay is of the blue-joint variety and of very fine quality, and at least 4000 tons could be cut in this township. Along the Carrot and Saskatchewan rivers there is a growth of poplar up to twelve inches in diameter and some large willows. The quantity is not great but it supplies the only source of fuel in the township as no coal nor lignite veins were noted. Good fresh water is obtainable in all the rivers but that in the marshes is not of good quality. The surface of the whole township, with the exception of the high land in section 31 and Fisher island is liable to flooding when the ice dams the Saskatchewan river at Grand rapids below Pas; this, however does not occur very frequently. During such a flood the water is usually between two and three feet over the banks of the rivers and the whole area becomes a large lake. No water-power can be developed. Summer frosts are liable to occur but they do not hinder any farming operations from being undertaken. The climate is well adapted to mixed farming. No stone nor minerals were found. Ducks are very plentiful and there are also a few geese. Jackfish, white-fish, pickerel, suckers and some sturgeon are found in the rivers. Ranching, mixed farming and market gardening could be successfully carried on in this township.—*J. S. Galletly, D.L.S., 1914.*

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## RANGE 28.

This township lies on the north slope of Duck mountain. The northern part  
**33.** has been burnt over and is now almost completely denuded of standing timber.

In the southern portion there is a large block of good timber consisting mostly of poplar, balm of Gilead and a few scattered large spruce. The township is nearly all good land with the exception of the northeast portion where it is very poor consisting of a bed of gravel greatly cut up by gullies. Sarah lake is a fine sheet of clear, pure, spring water and is evidently one of the sources of Roaring river. It is a great resort for ducks. Numerous signs of moose and jumping deer were seen throughout this locality. There are two settlers on section 32, both of whom had very good crops although the land was only broken in the spring.—*J. Dickson, D.L.S., 1900.*

A settlers' road was followed to section 32, where a very good ford was discovered across Roaring river. Thence south through fairly open country as far as the west boundary of section 6. It was necessary to go this far south before turning west in order to get around a long stretch of marshy land over which we could not go with the wagons. In section 6 an old trail was found going west which was followed for a mile and a half, when a lumber trail was met with going up to Sarah lake. This trail was followed in section 34, township 33, range 28. The road, with the exception of a few soft places, was fairly good. The soil is not rich, there being only about two inches of clay loam with a heavy clay subsoil, but with proper treatment it would be suitable for agricultural purposes. It is covered with a growth of young poplar with a willow scrub and burnt timber except in sections 23 and 14. These sections have some spruce of fair size (eight to sixteen inches), and, together with the timber that is in the other parts of the township around Sarah lake, would be worth reserving for a small timber limit. There is a sawmill at Sarah lake which supplies the country to the north of it with lumber. There are a few hay sloughs, but generally speaking hay is very scarce. With the exception of two or three small streams, good water is scarce, although it could probably be obtained by digging. The land is high and not liable to be flooded. There are no streams large enough for the development of water-power. The climate is moist and suited to grain growing, although occasionally summer frosts occur. Dead timber for fuel can be had in any part of the township, but no coal, nor rock of any kind, exists. Deer, moose and bears are plentiful and rabbits and partridges are in abundance.—*C. Harvey, D.L.S., 1904.*

In general this township averages over sixty per cent good farming and grazing  
**34.** country. It is abundantly furnished with good water and plenty of wood for fuel and rough building purposes. There are numerous streams, the principal one being Ruby river which runs northerly through the eastern tiers of sections and empties into Roaring river in range 27. The creeks in the western portion flow northwesterly and eventually empty into Swan river. The land varies from rolling scrubby prairie to swampy areas and is covered mostly with poplar or spruce bluffs.—*J. C. Desmeules, D.L.S., 1898.*

The northern part of this township has been overrun by fire leaving only a few  
**35.** scattered bluffs of poplar, on sections 26, 27, 33, 34 and 35. There is still a large quantity of dry poplar intermixed with willow and windfalls. The four sections in the northeast corner are low and marshy and afford quite an abundant growth of hay. "Square Plain," a gravel ridge with a grassy and open surface, lies diagonally across sections 27 and 33 and extends some distance into township 36. The district is well watered by several small creeks which have their source at the foot of Duck mountain. Swan river runs through sections 30 and 32.—*P. R. A. Belanger, D.L.S., 1897.*

The southwest portion of this township is hilly and broken by numerous ravines, the southeast part is fairly level. The whole southern half is covered with clumps of small poplar, scrub and willows, some of which, in the southeastern corner, have been destroyed by fire. This part of the township is well watered by numerous creeks which flow northerly and empty into Swan river. Along the shores of these creeks there are some excellent hay marshes. The soil throughout is first-class, being a deep rich black loam with a clay subsoil. Nearly all of the township is taken up by settlers.—*E. W. Hubbell, D.L.S., 1898.*

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In this township fire has cleared out a few sections in the southwest corner but  
**36.** the remainder is covered with dry or green poplar bluffs alternating with heavy scrubby openings and swamps. The northeast quarter, being partly heavily timbered with large poplars and partly covered with thick willow and swamps, was left unsurveyed. The south branch of Woody river flows across the northwest quarter while Swan river enters on section 4, flowing easterly, and after watering the southern sections, turns northerly across section 12 and runs out of the township in the southeastern corner of section 13. The Fort Pelly-Swan Lake trail enters the township in section 5 and in this same section it divides into two branches known as the North Branch and the South Branch. The soil is fair and fifty per cent of the land surveyed in this township may be considered as good for farming purposes.—*P. R. A. Belanger, D.L.S., 1897.*

The northeastern part of this township is nearly all covered with poplar, some of large size, willows and brûlé. There are numerous muskegs, especially in the northern part which is low and wet. The surface is level with a soil of very good quality. The trail from Fort Pelly to Swan lake passes through this township.—*E. W. Hubbell, D.L.S., 1898.*

The surface of this township, with the exception of the northwestern portion  
**37.** which is rough and hilly, is fairly level and covered with poplar from two to fourteen inches in diameter, some fair sized spruce, tamarack and an under-growth of red willow and hazel. The eastern part of the township is low and wet with numerous muskegs and swamps. Some good hay may be obtained from these marshes in fairly dry seasons. The Woody river, a stream about one hundred feet wide and four feet deep with a current of about two to three and one-half miles per hour, flows through the south half of the township. In addition to this river there are several other good sized streams of fresh water. A gravel ridge of prairie about six to fifteen chains wide, runs northeasterly through the township. The soil throughout is light and sandy with a gravel subsoil. The greater portion of this district should be well adapted to mixed farming.—*E. W. Hubbell, D.L.S., 1899.*

(Partial.)—T. B. No. 1790, comprising parts of sections 16, 17, 18 and 21 of this township is situated on the southern slope of Porcupine mountain, about ten miles distant from Bowsman, a station on the Prince Albert branch of the Canadian Northern railway. There is a very fair road from this station through this berth to T. B. No. 966. The surface is thickly covered with white and black poplar, spruce and some birch, and there is a considerable quantity of timber over ten inches in diameter suitable for lumber. After the timber has been removed, the greater portion of these sections will be available for agricultural purposes. The southwest quarter of section 21 is very rough and hilly, and will be suitable only for grazing. The water is generally of good quality but the creeks are small. No water-power can be developed. There are a few small meadows in the southwest quarter of section 21. No stone-quarries nor minerals were observed. There is a plentiful supply of poplar for fuel in every part of this berth. The climate was reported favourable and not more affected by summer frosts than other parts of the province. Moose, jumping deer and black and brown bears are plentiful, and there are also ruffed grouse and some prairie-chickens.—*W. T. Thompson, D.T.S., 1911.*

The southern half of this township is covered with large green poplar and  
**38.** considerable fine spruce which would be suitable for manufacturing purposes.

The district is watered by the Bowsman river which flows southeasterly across the township. This stream is about three or four feet deep, twenty to thirty links wide, has high cut banks and a current of about two and one-half to four miles per hour. In addition to this river there are numerous small creeks of good fresh water. The surface in the southern part is fairly level but towards the north it becomes rough and hilly. The first slopes of Porcupine mountain commence about the middle of this township. The soil throughout is of good quality.—*E. W. Hubbell, D.L.S., 1899.*

The trail follows along the railway for some distance and then leads off towards  
**44.** the hills. It is fairly good but has some soft places, and several creeks had to be bridged. The soil is a loam with clay subsoil and would be nearly all good farm land. The surface is level north of the railway and rises towards the south and is slightly rolling. It is all covered with heavy bush. There is considerable green timber in this township, six-inch to fourteen-inch jackpine at the south and east, and

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six-inch to twenty-five-inch spruce, four-inch to ten-inch birch, ten-inch to fourteen-inch black poplar and six-inch to ten-inch balsam scattered nearly all over the north third of the township. Hay is very scarce. Water is fresh and plentiful in numerous streams and some muskegs. In some places the land is liable to be flooded on the north side of the railway. There are no water-powers. The weather was warm but often cloudy with several showers. No frosts were noticed. The mosquitoes and sandflies were very bad. The only fuel is wood but it is quite plentiful almost anywhere. No coal, stone-quarries nor minerals were found. The only game seen was moose.—W. G. McFarlane, D.L.S., 1907.

(*North outline, ranges 28 to 32.*)—The country traversed by this line was mainly of a swampy nature, the surface being almost entirely covered with moss, varying in depth from three inches to two feet. Numerous floating bogs were crossed but, generally speaking, there is a solid bottom of gravelly clay or sandy loam lying from eighteen to twenty inches below the moss. Between the moss and clay lies a layer of black muck. The floating bogs are a semi-liquid mass of decaying vegetation, extending as a rule, in a northwesterly and southeasterly direction and are sometimes of a considerable depth, rendering travelling over this country in summer almost impossible. Notwithstanding the fact that the country has ample slopes for drainage to the watercourses, it remains inundated over large areas after the snow has disappeared in the spring. This is caused by the carpet of moss which prevents the water from reaching the outlets provided by the rivers. During the course of the survey, very few narrow ridges were crossed but these are inaccessible owing to the interlying swamps and bogs, and even aside from this, they offer in their present condition, meagre encouragement to the settler. There is in this country a drainage proposition which cannot be solved by individual settlers, but should be undertaken with a view to draining the whole country, following a well-devised plan. To allow homesteaders to attempt to convert this into farming land from its present condition is almost sure to result in failure and hence would be a setback to the development of what could be made a fair farming country. Notwithstanding the fact that the public attention has been so forcibly directed during the past three years to this portion of the Canadian West on account of the railroad construction, past and present, no attempt at agriculture has been made along the already operating Hudson Bay section of the Canadian Northern railway. This fact seems to prove conclusively that something must be done towards improving the drainage before settlers will attempt to work the land. This is a bushy country, the prevailing varieties of trees being spruce and tamarack. These are of no commercial value and are as a rule, small. South of the base line in ranges 28 and 29, spruce, suitable for ties, was found, but not in large quantities. The Overflowing river, a stream about eighty feet wide, was crossed in section 31, range 29. It flows northeasterly with a current of from two to three miles per hour. The banks are low and the country for a half a mile on either side shows evidences of flooding. No available water-powers were seen. A salt spring, the water of which was decidedly saline, was found flowing freely in March in range 28. Salt springs are of common occurrence in this country but with the exception of these no traces of minerals were found. The winter was considered a severe one throughout the west. During February the thermometer registered thirty-eight degrees below zero and the snow was a depth of two or two and a half feet, but the snowfall in February and March was very light. Bright cold days succeeded one another until the 15th of April when there was a decided rise in temperature and spring commenced at once. The mercury dropped to thirty-five degrees below zero on the night of March 13. Night frosts continued throughout April and May and the last frost noticed occurred on the night of the 5th of June. Game, including moose, caribou and deer, is very plentiful, particularly caribou and deer. The moose appear to live in the Pasquia hills in the summer and are not often seen in the lower land until the snow in winter drives them out of the hills. Minks were seen on the Overflowing, Waskwei and Pasquia rivers, and traces of lynxes were in evidence while rabbits and grouse abound.—T. H. Plunkett, D.L.S., 1912.

(*North outline, ranges 28 to 31.*)—By the 5th of April the snow was practically gone and the country was flooded to a depth of from one to two feet. From the commencement of the base in range 31 to the westerly limit of range 28, the country showed every evidence of being flooded, in the spring at least, this notwithstanding the fact that six watercourses were crossed in this distance. In section

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33, range 31, a river forty feet wide with banks four feet high flows north into Waskwei river, which was crossed in section 31, range 30. The Waskwei river, at this point, has a width of sixty-six feet with banks six feet high and flows north to join the Carrot river. In addition to these rivers, creeks fifteen feet wide, were crossed in sections 33 and 34, range 31. The Pasquia river flows through section 35, range 30. This river is about 100 feet wide with banks five feet high. It flows north into the Saskatchewan river at Pas.. These rivers were frozen almost to the bottom, consequently their currents were indeterminate. At high water on the Saskatchewan, the Pasquia river provides a channel for conducting the surplus Saskatchewan water over the country. In section 33, range 29, a creek one chain wide was crossed; this has no well-defined banks and meanders northerly through the muskeg to join the Pasquia river. For some distance on either side of it, the country is nothing but a floating mass. In range 28 the country became more rolling with fewer disadvantages for settlement, though it is also far from being desirable land for settlers. On all sides deep moss covers the ground, but under this there is in places a depth of over two feet of black loam; other parts were clay carrying limestone boulders. The range has been burned over along the Canadian Northern railway. The line passes through country continuously wooded. In range 31, there is a large area of tamarack swamps. In sections 31 and 32, tamarack and spruce vary from six to eighteen inches in diameter, but the tamarack are nearly all dead. Throughout range 31 considerable areas of this were encountered in every section. The patches of timber alternate with low wet places, generally covered with dense willow brush. In ranges 30 and 29 the heavy timber disappears and gives place to a dense growth of small spruce and tamarack on the comparatively dry ground, while on the bogs there is a scattered growth of stunted trees of the same varieties. Throughout range 28 the country is wooded with a dense growth of small spruce suitable only for cord-wood. For a description of the climate, minerals and game in this district, see the report of township 48, ranges 28 to 32.—*T. H. Plunkett, D.L.S., 1912.*

(*Partial, ranges 28, 29 and 30.*)—The route for reaching this district is by the Canadian Northern railway. The soil in the swamp portions is a rich black muck; on the ridges it is clay loam with more or less gravel and stones. The land in township 52, range 28, for one mile northwesterly and two miles southeasterly along the railway is mostly dry and timbered with spruce, tamarack and some poplar; though stony in parts, it should be suitable for mixed farming if cleared. The land surveyed farther from the railway is wet swamp, but would no doubt prove fertile if drained. It is timbered with small spruce and tamarack. In township 52, range 29, the sections surveyed are spruce and tamarack muskeg, crossed by ridges of jackpine. If cleared and the moss removed, they would probably prove suitable for mixed farming. The unsurveyed portion of this township is nearly all open bog and tamarack swamp and would require drainage to make it fit for settlement. The timber in township 52, ranges 28 and 29 is all small and suitable only for fuel or fence posts. Along a branch of the Pasquia river in range 29 there is a large supply of good timber for milling purposes and pulp-wood. The varieties are spruce up to thirty inches in diameter, poplar up to twenty-four inches and birch and jackpine up to twelve inches in diameter. There is no hay land. Water may be obtained anywhere by sinking a well a few feet. There is no alkali. No streams of any size nor water-powers were seen. The climate resembles that of older Manitoba. No summer frosts were observed. There is an abundant supply of wood for fuel but no coal. There are no stone-quarries nor minerals. Moose, caribou, jumping deer, prairie-chickens, partridges and ptarmigans constitute the game.—*E. W. Berry, D.L.S., 1912.*

This township can be reached by the railway, or by water from Pas up the  
**53.** Pasquia river. The soil of the southerly tier of sections is a rich black loam and if drained should be suitable for crops of any kind. The next two tiers northerly are for the most part on a dry ridge. In some of these sections the soil is good and only needs clearing to be fit for agriculture, while in others the surface soil appears to have been burned off and the ground is stony. The northerly sections surveyed are largely marsh. There is a strip of dry land, five chains in width, on each side of the Pasquia river where the soil is rich and vegetation very luxuriant. The southerly tier of sections is mostly open swamp with spruce and tamarack scrub. The next tier of two sections northerly is a ridge heavily timbered. The most northerly sections surveyed are largely marsh with willows. On the ridge in sections 10 to 15 the timber is poplar, spruce and jackpine up to fourteen inches in diameter and birch up to ten inches. There is a fringe of poplar up to fourteen inches in diameter along the Pasquia river. Elsewhere the timber is small spruce and tamarack. There is no

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hay land. No water-power can be developed. The climate is similar to that of older Manitoba. There was a frost on July 21st in the wet swamp adjoining the 14th base line, though it was not observed at Pas or in the drier portions of the country. This was the only frost noticed during the summer. No coal was seen but wood fuel is abundant. There is a good supply of gravel for road-making, etc., in a pit opened by the Canadian Northern railway in section 12. There are no stone-quarries nor minerals. Moose, jumping deer, ducks, partridges, prairie-chickens and ptarmigans in season are plentiful. The Pasquia river in this township flows between natural levees built up in the swamp by alluviation.—*E. W. Berry, D.L.S., 1912.*

## RANGE 29.

This township was at one time very heavily timbered with large spruce and

**33.** poplar but severe fires have swept this district and now only single living trees at long intervals remain. There is a small grove along the east boundary of section 1 and a narrow strip of fairly good timber along the east boundary of section 8. A good deal of scrub is springing up and there was such an immense growth of wild pease and vetches that it was necessary to cut through them in order to run the survey lines. This township lies on the north end of Duck mountain, the most northerly ridge of which passes from west to east through the second row of sections from the north. Two settlers located on section 36 last spring and although this was a very dry season they had a good yield. It will take a lot of labour and time to make this country suitable for farming but when this has been done the land should prove very fertile.—*J. Dickson, D.L.S., 1900.*

(*North outline.*)—In section 36 the line runs partly over prairie and partly

**34.** over broken country. It is crossed by a creek two or three feet deep and seven or eight feet wide which flows through a deep valley, wooded with large green poplars, underbrush and willows. Sections 35, 34 and 33 are broken and hilly with patches of open level prairie. There are numerous deep ravines and valleys all of which contain small creeks flowing north. In sections 32 and 31 the Swan river crosses the line several times. It is a stream averaging one chain in width, two or three feet deep and flows about two or three miles per hour.—*J. C. Desmeules, D.L.S., 1890.*

(*Subdivision.*)—This township is partly undulating and partly broken, especially in the northern part. Sixty per cent of the land may be considered very desirable for farming purposes and the rest, the northern portion, although somewhat broken and hilly, affords good grazing land as there is an abundance of good water and hay, and plenty of shelter. The soil is generally a black loam with a subsoil varying from clay to sand. In the southern two tiers of sections there is a considerable quantity of burnt fallen timber and a second growth of small poplars, willows and scrub. The south branch of the Fort Pelly trail runs easterly across the central part of the township.—*J. C. Desmeules, D.L.S., 1898.*

The surface of this township is generally hilly, especially along the Swan river,

**35.** but there are many large tracts of nearly level country and it is through this part that the trail from Fort Pelly to Swan lake is located. There are several fine creeks throughout the township, the principal one being Thunderhill creek, which takes its rise in a large muskeg situated at the foot of Thunder Hill. This creek is about six feet wide, varies in depth from one to three feet, has little current and flows into Swan river. Swan river is about one and one-half chains wide varying from one to eight inches in depth and flows easterly through the northerly part of the township. In the spring and early summer the current is very rapid and the river quite deep but under normal conditions the current is about two and one-half to three miles per hour. The banks vary in height up to fifty feet and the river bed is composed of a sandy loam interspersed with large limestone boulders. Poplar, willow hazel, scrub, some spruce and windfall constitute the timber which covers the greater part of the township. The soil throughout is of good quality being usually a black loam with a clay subsoil; in a few places a light sandy soil was encountered. This township should be a desirable one for settlement, especially if mixed farming is to be carried on.—*E. W. Hubbell, D.L.S., 1897.*

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The northeast quarter of this township is level and undulating and nearly all covered with fair-sized poplar and a thick growth of small spruce. The soil is a good black loam with a clay subsoil and may be rated as first and second-class land. The northwest quarter is much broken by ravines, hay sloughs and creeks. The timber is mostly burnt and the windfalls heavy, except in sections 31, 32, 33 and 34, where there is some large spruce and white birch ranging from ten to twenty inches in diameter. The soil is of good quality. The Woody river runs easterly through the northern tier of sections and at the time of survey was about two or three feet deep and very rapid. The part of the township described is not well adapted to immediate settlement.—*J. A. Belleau, D.L.S., 1899.*

The distance from this township to the town of Swan River is in the neighborhood of twelve miles. The road leading thereto is fairly practicable. The soil is generally composed of sandy clay of good quality and is fairly well adapted to the cultivation of all kinds of cereals. The surface is slightly undulating and appears to be thickly covered with poplar and spruce bush from ten to twenty inches in diameter. Much of the greater portion is poplar. There is very little hay, and where found was in the eastern part of the township. Woody river, having a width of about sixty feet and a depth of about two feet with a current of about two miles per hour, flows along the western limit of the township for two miles; it then follows near the south boundary up to the eastern limit of the township, which it intersects very near the southeastern corner. Another stream about twenty feet in width, having a depth of about six inches, with a slow current, flows from north to south, traversing the township in its western portion and emptying itself into Woody river. Many small streams were met with, but at the time the survey was made they were nearly all dry. Water is everywhere of good quality. The lands watered by these small streams do not appear to be submerged by floods. There are neither falls nor rapids which would permit of their being used as water-powers. The autumn has been remarkably fine. The first cold weather came with the first snow storm, on the last days of November. No stone-quarries nor minerals of any kind were seen. Game is scarce, although a few moose and bears were observed.—*J. F. Richard, D.L.S., 1904.*

This township is reached from Bowsman on the Canadian Northern railway by a wagon trail to section 13. This trail was cut out and continued to the west side of the township joining a trail made by a surveyor when running the western outline. The soil is mostly clay loam. The surface is rolling and wooded with poplar, spruce and underscrub of willows, alder and hazel. The whole township is covered with spruce and poplar from two inches to twenty-four inches in diameter, spruce predominating in the two northern tiers of sections and on sections 17, 18, 19, 20 and north halves of 7 and 8. A timber berth comprising this is now being surveyed. Some of the poplar in the balance of the township will be fit for sawing into lumber and large quantities of wood fit for fuel will still remain after all trees fit for lumber are cut. Hay is scarce, except probably in the southeast corner of the township. All the water is good. There are a large number of small creeks which run dry in late summer. No land is liable to flooding to any extent. There are no water-powers. The climate has no distinguishing characteristics. Wood is the only fuel. There are no stone-quarries, but there are plenty of boulders in the beds of the creeks. No other minerals were noticed. Moose, bears, elks, rabbits and partridges were seen and there were plenty of wild fruits, consisting of currants, gooseberries, cranberries and bearberries.—*J. Francis, D.L.S., 1905.*

To reach this township from the town of Swan River, a distance of about twenty-four miles has to be covered. The first half of this route is fairly good; but the road bordering on the south and west limits of township 37, range 29, is hardly practicable even for light loads. The soil, composed of a sandy clay, is of good quality and appears to be favourable for the cultivation of all kinds of cereals. This township is very undulating, nearly mountainous especially in its eastern portion. It is heavily timbered with a forest of spruce and poplar from ten to twenty inches in diameter. There are a few small streams of good water, having a width of from five to ten feet and a depth of six to ten inches. There are no water-powers, cascades nor rapids. The autumn has been very fine. The cold weather and snow started about the end of November. No stone-quarries nor minerals of any kind were seen. Game is scarce, although a few moose and bears were met with.—*J. F. Richard, D.L.S., 1904.*

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The trail follows along near the railway and crosses numerous creeks which had to be bridged. It was very soft in many places and crosses some muskeg which had to be corduroyed. The soil is good throughout a large part of the

- 44.** north third of this township, but there is also considerable muskeg. Much of the good land was nearly covered with water. The surface is level to the north of the railway, and rises toward the south side, and it is all heavily wooded. There is considerable timber scattered throughout the township but the best of it has been cut. Poplar six to fifteen inches and spruce from six to twenty-four inches are the chief kinds, although a few twelve-inch birch and balsam were also found with six-inch tamarack in muskegs. Hay is more plentiful here than to the east. Several good hay sloughs are found along the north chord. The water is all fresh and very plentiful. One or two branches of Armit river run north to the main river. One is about a chain wide and from three to four feet deep with a current of three or four miles per hour. A considerable part of the land here is swampy and might be flooded at times, as it was this year, being several inches deep. There are no water-powers. The weather was warm but often cloudy with some rain. No frosts were noticed. The only fuel is wood, but it is plentiful everywhere. No coal, stone-quarries nor minerals were found. Moose was the only game seen.—*W. G. McFarlane, D.L.S., 1907.*

The route for reaching this township is by the Canadian Northern railway.

- 51.** The soil is mainly of a peaty texture formed by decayed moss and underlain with clay. The surface is wet muskeg covered with moss, and timbered with small spruce and tamarack. The banks of the Pasquia river in range 29 average fifteen feet in height above its bed, and the land on either side seems to slope gradually away from its banks. The sections adjoining the river could probably be drained into it at comparatively small expense and rendered fit for mixed farming. The banks are dry and somewhat stony, and would furnish good sites for settlers' buildings. The timber along the river is smaller than in its lower reaches in township 52. There is, however, sufficient spruce and poplar over ten inches in diameter for settlers' needs. There is no hay land. The water of the river is fresh, and water may be obtained anywhere by sinking wells a few feet. There are no falls on the river, but there are many long stretches of rapids. As the banks are high, a plant to develop about 100 horse-power could be built on this stream by the construction of a dam. The climate resembles that of the older portions of Manitoba. As the survey commenced in October, no information was obtained regarding summer frosts. Vegetables are successfully grown by the section-man at Turnberry. The only fuel available is wood, of which there is an abundant supply. There are no stone-quarries nor minerals. The following varieties of game are found: moose, caribou, jumping deer, partridges, prairie-chickens and ptarmigans.—*E. W. Berry, D.L.S., 1912.*

- 52.** (*North outline.*)—(See report on township 52, range 28)—*T. H. Plunkett, D.L.S., 1912.*

(*Partial.*)—This township is reached by the Pas branch of the Canadian Northern railway which runs through sections 5, 4, 9, 10, 11, 14, 13 and 24. The soil consists of peat and muck over clay or gumbo from three to eight feet below the surface and is not suitable for agriculture. The surface is a slightly undulating muskeg with occasional floating bogs. A considerable portion of this muskeg could be easily drained as there is considerable natural slope to the land. There are large bogs in sections 24, 23, 22, 25, 26 and 27 which are nearly open and are practically impassable in summer. The muskegs are covered with a light growth of spruce and tamarack, mostly from two to six inches in diameter, but in sections 23 and 24, along the edge of a large floating bog, there is some spruce and tamarack up to twelve inches in diameter. A few trees could be cut in these sections, beyond which there is no timber in the township. Some of the spruce and tamarack might be suitable for cord-wood or fence posts. There is no hay. The water is sweet and good. The supply is permanent, and in places where it is not found on the surface it can be obtained by digging a few feet. There are no water-powers. The climate appears to be similar to that of other parts of Manitoba in the same latitude. Wood is the only fuel available, and can be obtained everywhere. There are no stone-quarries nor minerals of economic value. The game consists of moose, caribou, partridges, prairie-chickens, grouse, ptarmigans, rabbits, wolves, coyotes, minks, weasels and martens. Caribou are abundant during the winter.—*P. E. Palmer, D.L.S., 1913.*

(*Subdivision.*)—See report on township 52, range 28.—*E. W. Berry, D.L.S., 1912.*

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**56.** (*North outline.*)—The Saskatchewan river was crossed twice in this range, the country being of a marshy nature with a rich black muck soil. On the south side of the Saskatchewan river lies Saskeram lake. This is more truly a large marsh containing some small lakes connected by sluggish creeks. Several small islands exist covered with spruce, tamarack, poplar and birch up to ten inches. The main winter dog trail between Pas and Cumberland House crosses this lake.—*E. W. Robinson, D.L.S., 1911.*

## RANGE 30.

**33.** (*North outline.*)—This country has been frequently burned over, and is now covered with a second growth of poplar, willow and alder, where not prairie. The soil is good, being of best clay or black sandy loam. There are numerous coulées, hay swamps and meadows, affording the best grazing lands and hay for cattle.—*J. C. Desmeules, D.L.S., 1898.*

(*East outline.*)—The surface varies from level to rolling. It is well watered and occasional swamps are met with. The soil is clay loam. The timber is good and consists chiefly of poplar.—*J. L. P. O'Hanly, D.L.S., 1881.*

(*South outline.*)—This line crosses Duck mountain, a rough, hilly and burnt country, broken by swamps and ponds. At a short distance south there is a belt of small timber, evidently growing in a chain of spruce swamps. The soil is good but the surface is rough, hence the land is second class.—*P. R. A. Belanger, D.L.S., 1897.*

(*Subdivision.*)—The soil of this township is of very good quality being a deep clay loam containing some large pieces of shale limestone and having a clay subsoil. The district has been almost entirely denuded of timber; it is well watered by Bearhead creek.—*C. F. Aylsworth, D.L.S., 1900.*

**34.** (*North outline.*)—For the first half of section 36, the line runs through heavy poplar bush with dense willow underbrush. From here to section 34 it is scrubby prairie after which bluffs of poplar are interspersed with patches of prairie.—*J. C. Desmeules, D.L.S., 1898.*

(*East outline.*)—The southern part is fairly level, being old brûlé with alders and small poplars and occasional swamps and having a good clay soil. The northern part is broken by the valleys of a creek and of Swan river; this river is a swift stream with a narrow valley. The soil is light and sandy, covered with a thick brush of willow with spruce and poplar.—*J. L. P. O'Hanly, D.L.S., 1881.*

(*Subdivision.*)—The Swan river, Bearhead creek, and many smaller streams, abundantly water the whole of this township, making it a most desirable part of the country both for farming and grazing purposes, except a strip of land which may be considered valueless, being rough and stony, especially in parts of sections 8, 9, 10, 14 and 15. Sections 29 and 30 and part of 31 and 32 are a swamp, of no value for farming, but covered with spruce which would be valuable for fuel and building. The country is all old brûlé, now covered with a second growth of poplar, willow and alder, where not open prairie.—*J. C. Desmeules, D.L.S., 1898.*

**35.** (*East outline.*)—The country along this line is prairie with scattered bush. The soil is sandy loam for two and one-half miles to Thunder hill and from here to section 36 the line crosses Thunder hill, which is covered with great piles of fallen timber. The ascent and descent are rapid. The soil is clay. In section 36 the line crosses a deep wet marsh. The north quarter section is nearly level with good clay soil and small clumps of willow and poplar brûlé.—*J. L. P. O'Hanly, D.L.S., 1881.*

This line traverses open prairie or burnt country that is now overgrown with young poplar and willow. Thunder hill is an isolated prominence which rises about 500 feet above the plain, and is very steep and roughly broken by landslides and deep ravines on the north side.—*P. R. A. Belanger, D.L.S., 1897.*

(*Subdivision.*)—The only timber in this township consists of an occasional dead spruce and tamarack bluff. The district is well watered by Little Woody river and Thunder Hill creek. The soil is first and second-class. Thunder hill, which is about

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150 feet high, occupies quite a large portion of the east half of the township.—*C. F. Aylsworth, D.L.S., 1900.*

**36.** (*North outline.*)—This country is level with green poplar about twelve inches in diameter and a heavy undergrowth of young poplar, willow and alder, covering it, except in section 32 which is brûlé with dead and fallen timber consisting of spruce, poplar and willow scrub. Three small creeks cross this section. The land is all second-class, the soil being a black loam with a clay subsoil.—*E. W. Hubbell, D.L.S., 1898.*

(*East outline.*)—The northern half is level and low covered with willows, poplar and spruce. Across section 13 there is some large poplar, spruce and some tamarack. The southern two miles is brûlé with small scattered poplars. All the land is first-class.—*J. L. P. O'Hanly, D.L.S., 1881.*

The northern part is rolling country covered with large poplar and scattered spruce, and is crossed by several creeks. The soil is first-class. Section 13 is rolling country with large spruce and poplar, and second-class soil. The southern part is brûlé thickly overgrown and has a soil which is mostly second-class. The south branch of Woody river crosses at section 12.—*P. R. A. Belanger, D.L.S., 1897.*

(*Subdivision.*)—The southern portion of this township has a light sandy soil and is rather heavily timbered. There is a considerable amount of dead spruce which is being rapidly used up by the Doukhobors who have settled in this district. In sections 1 and 3 there are Doukhobor villages, the inhabitants of which are continually improving their homes.—*C. F. Aylsworth, D.L.S., 1900.*

**44.** The trail runs back to the south of the railway in range 29, about two miles along higher ground until it is about a mile past Westgate when it turns back towards the railway and crosses another branch of Armit river. It then follows along the railway through corduroyed muskeg for about three miles when it comes out into drier fluffy poplar country. It was very soft in places and several parts were flooded. The ford at the river was good. The surface is chiefly muskeg in the easterly half but the westerly part is excellent and quite open in places and would make excellent farm land. The soil is a good loam and clay. The surface is level and almost flat. The easterly half is all covered with small timber and the west side with small timber and scrub, but the intervening part, about 600 acres of prairie, is fluffy. There is no timber of any value, it being chiefly small tamarack, spruce and poplar, with considerable alder and willow. Scattered six to twelve-inch spruce and poplar are found. Hay is plentiful on the prairie and is of excellent quality. There are several hay sloughs to the west of the prairie. The water is all fresh and very plentiful in the streams and muskeg. Only small streams are found. The land was partly flooded this summer on account of the wet season. There are no water-powers. The climate was fine and warm in general but there were several showers and some cloudy weather, but no frosts. The only fuel is wood but it is plentiful everywhere. No stone-quarries, coal nor minerals were found. No game was seen.—*W. G. McFarlane, D.L.S., 1907.*

(*East outline.*)—This line was reached from a toboggan trail cut south from the Pas branch of the Canadian Northern railway at the point where it crosses the east outline of township 51, range 30. It could also be reached from Chemong on the same railway along the 13th base line. Neither route is possible for horses in summer. The surface of the country along this line is usually muskeg, swamp or bog, and the soil either peat or muck. Along the Overflowing river, which runs through sections 12 and 13, there are some ridges of black loam and clay soil which might be suitable for agriculture, as well as sloughs and marshes which would provide rich pastureage for cattle, and in a dry year some hay. Other than this, there is no agricultural land along this line. The surface is nearly level and the muskegs are as usual covered with a light growth of spruce and tamarack of no commercial value. The clay ridges along the Overflowing river are covered with a heavy growth of black and white poplar, up to eighteen inches in diameter, much of which would be suitable for lumber or pulp. There is a large quantity of spruce and poplar from six to eighteen inches in diameter in the southwest quarter of section 1. Owing to its isolated position the timber in this locality is of little commercial value. The Overflowing river where it crosses this line runs in a northerly direction, changing as it proceeds to northeasterly. It is about one chain in width and from three to five feet deep. The current is some-

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what sluggish and it is navigable for canoes and boats. The water is sweet and good in this river as in the muskegs and sloughs of the whole country, and the supply is abundant and permanent. There are no water-powers, no stone-quarries and no minerals of economic value. Wood, which is everywhere available, is the only fuel to be found in this section of the country. The climate appears to be similar to that of other parts of Saskatchewan in the same latitude. Moose, caribou, deer, bears, wolves, coyotes, rabbits, muskrats, minks, ermines, foxes, otters, sables, lynxes, martens, partridges, ptarmigans, grouse, prairie-chickens and ducks are found, especially along the Over-flowing river.—*P. E. Palmer, D.L.S., 1913.*

*(Partial.)—This township is reached by a toboggan trail cut south along the east outline of range 30 from the Pas branch of the Canadian Northern railway which passes through section 31.* The soil of this township is peat or muck and is not suitable for agriculture. The surface is a nearly level muskeg and is covered with a light growth of tamarack and spruce which is not of any commercial value. There are some areas of burnt muskeg. The Pasquia river, which crosses the north boundary of section 34, is about fifty feet wide and three feet deep, with a sluggish current, and might possibly be navigable for boats and canoes. No hay, timber, water-powers, stone-quarries nor minerals of economic value were seen. The water in the muskegs and in the Pasquia river is sweet and good and the supply is permanent and abundant. The climate appears to be similar to that of other parts of Saskatchewan in the same latitude. Wood is the only available fuel and is everywhere abundant. The game consists of moose, caribou, rabbits, muskrats, minks, wolves, coyotes, ermines, sables, otters, partridges, prairie-chickens, grouse and ptarmigans. Caribou are very abundant.—*P. E. Palmer, D.L.S., 1913.*

*(Partial.)—This township is reached from the Pas branch of the Canadian Northern railway which runs through sections 4, 3, 10, 11, 14, 13 and 24.* The soil is peat or muck and it is not suitable for agriculture. The surface is nearly level muskeg and is covered for the most part with a growth of spruce and tamarack which is too small and stunted to be of any commercial value. In some places the surface is nearly open, while in others brûlé is found. No hay was seen and no water-power can be developed. The water in the creeks and muskegs is sweet and good, and the supply is permanent and abundant. The climate appears to be similar to that of other parts of Saskatchewan in the same latitude. Wood, which is everywhere abundant, is the only available fuel. There are no stone-quarries nor minerals of economic value. Moose, caribou, wolves, coyotes, foxes, minks, ermines, otters, muskrats, rabbits, partridges, grouse, ptarmigans, and prairie-chickens are found in this locality.—*P. E. Palmer, D.L.S., 1913.*

*(North outline.)—(See report on township 52, range 28.)—*T. H. Plunkett, D.L.S., 1912.**

*(Subdivision.)—(See report for township 52, range 28.)—*E. W. Berry, D.L.S., 1912.**

*(North outline.)—Through this range the country is marshy and is drained by sluggish creeks. To the north lies Barrier lake, which is very shallow and could more truly be called a marsh. Saskatchewan river was crossed in section 36, and along its banks is a dense growth of grey willow with black and white poplar up to twelve inches in diameter in places.—*E. W. Robinson, D.L.S., 1911.**

## RANGE 31.

*(East outline.)—This line runs through undulating country covered with poplar scrub. It is old brûlé with occasional bluffs of second-growth young poplar. Much of the country is low and wet with many meadows and marshes. The soil is black loam with a subsoil of gravelly clay or sand.—*E. W. Hubbell, D.L.S., 1898.**

*(South outline.)—The country along this line is rolling prairie with numerous swamps and hay sloughs. The western mile and a half is covered by lac La Course. Parts of this line are covered with spruce, poplar and tamarack timber and some willow swamps.—*P. R. A. Belanger, D.L.S., 1897.**

*(Subdivision.)—The south half is much cut up by hay sloughs, marshes and small lakes. There are large bluffs of spruce and poplar in sections 1, 2, 3, 4, 5, 8, 9, 10*

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and 11. The surface is level and undulating and the soil is a deep black and sandy loam with a subsoil of clay and sand. The north half is higher land, with bluffs of light green and burnt poplars and willows. There are some small lakes and hay marshes. Swan river flows through sections 32 and 33. This is a desirable township for stock-raising.—*J. A. Belleau, D.L.S., 1899.*

**34.** (*East outline.*)—The country here is level open prairie, with poplar scrub in some places and bluffs of young poplar in others. There are a few small swamps and lakes. The Swan river crosses the west boundary of section 6 and the east boundary of section 12.—*E. W. Hubbell, D.L.S., 1898.*

(*Subdivision.*)—The township is broken on the south by Swan river, which has large flats on both sides. These flats are lightly timbered and are well adapted to agriculture, as the soil is rich black loam with a clay subsoil. The north portion is slightly rolling and covered with a dense growth of poplar and willows. The soil is black and sandy loam with a subsoil of clay, sand and gravel. This portion is well adapted to agriculture.—*J. A. Belleau, D.L.S., 1899.*

The land within the area surveyed, the northern tier of sections, will require a little drainage before it will be suitable for agricultural purposes. There is practically no timber, the greater part of it having been destroyed by fire. The greater part of the soil is good but on account of its swampy nature it was rated as second-class.—*C. F. Aylsworth, D.L.S., 1900.*

**35.** (*East outline.*)—The country is undulating and is covered with a heavy underbrush of poplar, willow and old brûlé. The soil is black and sandy loam with a subsoil of clay.—*E. W. Hubbell, D.L.S., 1898.*

(*Subdivision.*)—On the southern two-thirds of this township there is considerable poplar and willow scrub and many large patches of prairie. On the northern third there are large quantities of dead poplar and spruce and judging by the condition of the latter it should be quite suitable for rough building purposes. The township is well watered.—*C. F. Aylsworth, D.L.S., 1900.*

**36.** (*North outline.*)—Along this line there is rolling country heavily timbered with spruce and poplar, alternating with large standing dead timber and windfalls. It is watered by Maloneck creek, and occasional swamps. There is no very good land.—*J. A. Belleau, D.L.S., 1899.*

(*East outline.*)—The country is level and mostly brûlé covered with much dead timber standing and fallen. There is everywhere a dense growth of young poplar and willow scrub. The soil is black loam with a subsoil of clay and is second-class.—*E. W. Hubbell, D.L.S., 1898.*

(*Subdivision.*)—In the northern portion of this township there is a large quantity of dead spruce that would be valuable for lumber but if left as it is for a few years will become practically useless. The soil in this part is sandy. The southwest quarter is very heavily timbered with poplar and spruce and has a very fair soil.—*C. F. Aylsworth, D.L.S., 1900.*

The trail followed in reaching this township runs along near the railway, crossing it four times. Numerous creeks had to be bridged, and some muskegs corduroyed and soft places brushed as the country is very flat. The water lying on it makes the ground very soft. The soil is excellent with the exception of some muskeg west of Roscoe and a sandy ridge at Roscoe. Along a branch of Armit river, about a mile east of Roscoe, the land is excellent for farming. The surface is almost level and is almost all covered with small timber. There is no timber of much value although scattered six to fourteen-inch spruce and poplar are found. Tamarack, balsam and birch are also found. Hay is scarce. The water is fresh and very plentiful. Armit river is a good stream about half a chain wide and four to five feet deep with a current of about three miles per hour. This river drains a considerable part of the land, but there is some so level that it was almost flooded. There are no water-powers. The weather was usually bright and warm though there was some rain also. No frosts were noticed. The only fuel is wood which is plentiful. No coal, stone-quarries nor minerals were found and no game was seen.—*W. G. McFarlane, D.L.S., 1907.*

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(*East outline.*)—This line was reached by cutting a toboggan trail south from  
**49.** Cantyre, a station on the Pas branch of the Canadian Northern railway, in section 36 of the township to the north. It could also be reached from the railway along the 13th base line. The country traversed by this line is muskeg and floating bog with a soil of peat or muck, and there is no land suitable for agriculture. The surface is very nearly level, and the muskegs are covered with a very light growth of spruce and tamarack, while the bogs and sloughs are open except for a light growth of scrub. There is no hay. The water in the creeks, muskegs and bogs is sweet and good, and the supply is abundant and permanent. No water-powers, stone-quarries nor minerals of economic value were seen. Wood is the only fuel available. The trees are mostly too small for this purpose but there are occasional clumps of large trees. Moose, caribou, bears, partridges, prairie-chickens, ptarmigans, rabbits, wolves, coyotes, minks, muskrats, foxes and ermines constitute the game.—P. E. Palmer, D.L.S., 1913.

This township is reached by the Pas branch of the Canadian Northern railway which traverses the township from section 7 to section 36. The station of  
**50.** Cantyre is in section 36. The soil of this township is almost all peat or muck. There are a few small stretches of hay along the western boundary, and also along a creek in sections 9, 10, 15 and 16, but there is not enough to be of value as agricultural land. The surface is a nearly level muskeg and is covered for the most part with a very light stunted growth of spruce and tamarack. There is some spruce and tamarack up to twelve inches in diameter in sections 6, 7, 30, 18, 19, 15, 16, 10 and 9, in each of which a limited number of ties might be cut, and in sections 7, 18 and 19, a little long timber could be obtained; possibly 100,000 ties could be cut in this township. The water in the creeks and muskegs is sweet and good, and the supply is abundant and permanent. There is no hay. The climate appears similar to that of other parts of Saskatchewan in the same latitude. Wood, which is everywhere available, is the only fuel. No water-powers, stone-quarries nor minerals of economic value were seen. The game consists of moose, caribou, bears, partridges, grouse, prairie-chickens, ptarmigans, rabbits, ermines, minks, muskrats, wolves and coyotes, caribou being very plentiful over the eastern portion of the township during the winter.—P. E. Palmer, D.L.S., 1913.

(*East outlines.*)—This district was reached by cutting a toboggan trail from Cantyre, a station on the Pas branch of the Canadian Northern railway in section 36, township 50, range 31. It could also be reached along the 14th base line from the same railway but the latter route was not so direct. The soil is usually a peat or muck except near the Waskwei river and the two creeks which cross this line, at which places there are narrow belts of clay or loam. There is no agricultural land along this line. The surface of the country is nearly all muskeg or floating bog except along the creeks as mentioned above. There are extensive open floating bogs in section 13, township 52, range 31, which run in a northeasterly direction. As far south as the north boundary of section 24, township 51, the muskegs are covered with a growth of spruce and tamarack up to ten inches in diameter; most of these trees are, however, under four inches in diameter. The growth near the Waskwei river is rather heavier than elsewhere. There is no timber of commercial value along this line. South of the north boundary of section 24, township 51, the country has been nearly all burned over. The muskeg in this district is covered with a few standing dead trees and much scrub and brush, while the clay banks of the creeks and one or two small clay ridges carry a thick second-growth of jackpine and poplar and much windfall. The Waskwei river, which crosses the east boundaries of sections 36 and 25 of township 52, averages about sixty feet in width and is about three feet deep. There is some spruce and poplar up to twelve inches in diameter on the west side of this river and many thick clumps of willow grow along its banks. It appears to be navigable for small boats or canoes. The water in the river and also in the creeks and muskegs is sweet and good and the supply is apparently permanent and abundant. No water-powers, stone-quarries nor minerals of economic value were seen. There is no hay in this locality. Moose, caribou, bears, partridges, prairie-chickens, grouse, ptarmigans, wolves, coyotes, lynxes, otters, muskrats, minks, ermines and foxes are found.—P. E. Palmer, D.L.S., 1913.

**52.** (*North outline.*)—(See report for tp. 52-28-Pr.)—T. H. Plunkett, D.L.S., 1912.

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**56.** (*North outline.*)—A belt of spruce and tamarack from four to six inches in diameter was crossed in sections 34, 35 and 36. This strip of timber stretches in a northwesterly direction and contains a considerable quantity suitable for pulpwood.—*E. W. Robinson, D.L.S., 1911.*

## RANGE 32.

**33.** (*East outline.*)—This line traverses an open level country with poplar bluffs and scrub. —*E. W. Hubbell, D.L.S., 1898.*

(*Subdivision.*)—The Keesekoosie Indian reserve covers the southeastern part. The whole of this township is high rolling land covered with underbrush and brûlé with an occasional bluff of spruce or second-growth poplar. Its proximity to Fort Pelly makes it very desirable for settlement, and besides it is well adapted to mixed farming. There is an abundance of grass and water but no timber of any consequence. The soil is composed of good sandy loam with a subsoil of sand and clay.—*A. F. Martin, D.L.S., 1899.*

**34.** (*East outline.*)—The country along this line is undulating country partly open and partly covered with poplar and willow scrub. There are a few sloughs and occasional bluffs of poplar.—*E. W. Hubbell, D.L.S., 1898.*

(*Subdivision.*)—This township is well adapted to both farming and stock-raising, being well supplied with large patches of open prairie, numerous creeks, many large hay marshes and large bluffs of green and dry spruce and poplar. Swan river enters in section 30, flows southeasterly and leaves in section 1. The soil is black and sandy loam with a subsoil of clay and gravel. There are a few good sized lakes, the largest being Donald lake in section 36, and Clarke lake in sections 6 and 7.—*J. A. Belleau, D.L.S., 1899.*

**35.** The northern two miles of the township is level and undulating. It is heavily timbered with spruce, poplar and a thick second-growth of poplar interspersed with hay sloughs and patches of prairie. The southern part of the township is more open and mostly covered with willows and scrub, nearly all dried and burnt. Some bluffs of spruce and poplar are met with along the southern boundary. Maloneck creek and a trail to Whitefish lake cross sections 25, 24, 13, 12 and 1. This township is well adapted to either farming or stock-raising. The soil may be rated first and second-class.—*J. A. Belleau, D.L.S., 1899.*

**36.** (*East outline.*)—The country along this line is prairie, while in places it is rolling and quite broken. There is considerable spruce, poplar, birch, brûlé and windfall, and in section 36 there is a spruce muskeg. A creek crosses at every section, besides Maloneck creek in sections 1 and 12. There is some tamarack and swamp in the southern part. The soil is mostly black loam with a clay or gravel subsoil, and is second and third-class.—*J. A. Belleau, D.L.S., 1899.*

**44.** This is a fractional township. It is nearly all muskeg and would be very hard to cross with teams. The poplar bush in the west side of range 31 was broken down flat and it would require weeks to cut a road through it. The soil is nearly all muskeg and is of little use. The surface is flat and quite a lot of it covered with small spruce and tamarack but there is some open floating muskeg. There is no timber of any value. Hay is very scarce. Water is fresh and very plentiful, especially in the muskeg. Some small streams are found at the south. There are no water-powers. The weather was usually bright and warm, though we had some rain also. No frosts were noticed. The only fuel is wood, which is plentiful. No coal, stone-quarries, nor minerals were found, and no game was seen.—*W. G. McFarlane, D.L.S., 1907.*

**45.** This is a fractional township. The soil is mostly muskeg. There are some stretches of land with poplar, but they are scattered and flat. The surface is flat and thickly wooded except in the muskeg, some of which is open and floating. There is no timber of any value. Hay is not plentiful, but there is some in sloughs towards the north. The water is fresh and very plentiful in muskegs and sloughs. The land was partly flooded several inches deep on account of the wet season and no streams to drain it off. There are no water-powers. The weather was usually bright and warm with showers of rain, but no frosts. Wood is the only fuel but it is plentiful. No coal, stone-quarries nor minerals were found and no game was seen.—*W. G. McFarlane, D.L.S., 1907.*

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This township is reached from the Pas branch of the Canadian Northern rail-way which is distant about four and a half miles from the southwest corner of the township and about three-quarters of a mile from the northwest corner. There are no trails from the railway to this township. The soil is of peat or muck and is not suited to agriculture. The surface is muskeg, nearly level, and interspersed with floating bogs which are nearly open, while the muskegs are covered with a light growth of spruce and tamarack up to ten inches in diameter. Along the creek banks in sections 13, 24 and 25 there is some spruce, tamarack and poplar up to twelve inches in diameter, some of which might be suitable for ties, but there is not enough to make lumbering profitable. There is no hay. The water in the creeks and muskegs is sweet and good, and the supply is abundant and permanent. There are no water-powers, stone-quarries nor minerals of economic value. The climate appears to be similar to that of other parts of Saskatchewan in the same latitude. Wood, which is everywhere abundant, is the only fuel available. The game consists of moose, caribou, coyotes, wolves, ermines, minks, otters, martens, sables, lynxes, foxes, partridges, grouse, ptarmigans, prairie-chickens, and rabbits.—*P. E. Palmer, D.L.S., 1913.*

This township is reached from the Pas branch of the Canadian Northern rail-way which runs through sections 1 and 12. The station of Otosquen is in this township. There is also a water tank and logging spur in tp. 50-1-2, about one-half mile from the west boundary of this township. The soil is usually peat or muck. There are a few limited areas of clay and loam along the creeks, but such tracts are low and wet and are not suitable to agriculture. The surface is nearly level. It is about fifty per cent muskeg covered with a light growth of spruce and tamarack up to eight inches in diameter. There is a considerable area of open floating bog in section 1. The remainder of the township is low lying, swampy land covered with a rather thick growth of spruce and tamarack from four to eighteen inches in diameter with a small quantity of birch and balsam up to ten inches in diameter. In sections 12, 13, 24 and 25 there is a great deal of spruce and tamarack suitable for lumber. There is probably about 5,000,000 feet board measure in these sections and a very large number of ties. Ties could also be cut in the northeast quarter of section 36 and in section 1. T. B. No. 1713 extends into section 13, but does not include more than thirty per cent of the lumber in this township. There is no hay. No water-powers, stone-quarries nor minerals of economic value were found. The water is sweet and good, and the supply is permanent and abundant. The climate appears to be similar to that of other parts of Saskatchewan in the same latitude. Wood, which is everywhere plentiful, is the only fuel available. Moose, caribou, bears, partridges, ptarmigans, grouse, prairie-chickens, rabbits, foxes, lynxes, coyotes, wolves, ermines, minks, martens and sables are found in this locality.—*P. E. Palmer, D.L.S., 1913.*

## RANGE 33.

(*East outline.*)—Commencing at the south, the first mile and a half is through undulating prairie. The next three miles is through thick bluffs of poplar and willow, burnt and green. The fifth mile is through scattered bluffs of poplar and spruce muskeg and crosses the valley of Snake creek. The last mile is through open, undulating country. The soil is generally light and composed of black and sandy loam with a subsoil of sand and gravel.—*J. A. Belleau, D.L.S., 1899.*

(*Subdivision.*)—The country here is open prairie with some scrub.—*A. F. Martin, D.L.S., 1899.*

The east boundary crosses heavy spruce and tamarack muskegs, large bluffs of poplar and spruce brûlé and windfall. It crosses Swan river in section 25, and that part of the township north of the river is open country interspersed with light burnt scrub. It forms the top of Swan river valley and is 150 feet above the river.—*J. A. Belleau, D.L.S., 1899.*



